



OSKARSHAMN SEMINAR REPORT

19-21 September 2001





A street in Oskarshamn historic center

TABLE OF CONTENTS

<u>INTRODUCTION</u>	<u>4</u>
<u>FIRST CASE STUDY – SELLAFIELD, UNITED KINGDOM</u>	<u>7</u>
CUMBRIA COUNTY COUNCIL’S EXPERIENCE AND PERSPECTIVES ON THE DEVELOPMENT OF NUCLEAR WASTE DISPOSAL FACILITIES	7
FRIENDS OF THE EARTH AND THE NIREX RCF INQUIRY	16
NIREX AND THE RCF INQUIRY	19
DISCUSSION	24
<u>THE SWEDISH CONTEXT</u>	<u>31</u>
BACKGROUND CONTEXT ON NUCLEAR WASTE POLICY IN SWEDEN	31
BACKGROUND CONTEXT ON SKB NUCLEAR WASTE MANAGEMENT ACTIVITIES	35
<u>SECOND CASE STUDY - OSKARSHAMN</u>	<u>37</u>
FEASIBILITY STUDY IN OSKARSHAMN	37
MUNICIPAL EXPERIENCE AND PERSPECTIVES	40
EXPERIENCE AND PERSPECTIVES FROM AN NGO VIEWPOINT	44
DISCUSSION	48
<u>THIRD CASE STUDY : TIERP, SWEDEN</u>	<u>55</u>
FEASIBILITY STUDIES IN TIERP	55
MUNICIPAL EXPERIENCE AND PERSPECTIVES	58
EXPERIENCE AND PERSPECTIVES FROM AN NGO VIEWPOINT	61
DISCUSSION	63
<u>WORKING GROUPS REPORT</u>	<u>72</u>
WORKING GROUP 1	72
WORKING GROUP 2	74
WORKING GROUP 3	76
WORKING GROUP 4	78
WORKING GROUP 5	80
WORKING GROUP 6	83
WORKING GROUP 7	84
WORKING GROUP 8	85
WORKING GROUP 9	86
WORKING GROUP 10	88
<u>PANEL SESSION AND DISCUSSION WITH THE AUDIENCE</u>	<u>89</u>

Introduction

MR. TORSTEN CARLSSON

Dear Ladies and Gentlemen I am glad to host you here in Oskarshamn.

The district comprises many small and middle sized villages. We have between 500 and 1,500 inhabitants in the villages. The city of Oskarshamn itself comprises about 18,000 people. The biggest employers are Scania which produces truck cabins and Oskarshamn's Nuclear Power Group and other middle sized companies. We have about 13,000 inhabitants that are employed everyday. We have a low rate of unemployment.

Put in a global perspective, this is perhaps not remarkable that nuclear power and nuclear waste issues awakened strong feelings, both in our district and in other communities and districts all over the world because this peaceful drive has its origin in the military area and the power producing reactors suffered catastrophes with tragic destruction and consequences for thousands of people, for example, in Chernobyl. Because of this, there is significant lack of trust towards the industry and the decision makers, and this cannot be ignored. For us in Oskarshamn, this knowledge has been and is the base to organise our democratic work in the nuclear waste issues. It is very important for us that our organisation and our methods are credible amongst the decision makers, the authorities and the industry both locally, regionally and nationally. To be able to achieve the credibility that we want, our project management has the competence and the knowledge that is required. The ability to work in a politically sturdy organisation has to be and is the best. Without having very ample extroverted activities that target the inhabitants of the community, it is impossible to gain credibility. One of the main groups we have to reach is our youth, which will be overseeing the decisions that we take. The time factor is very important in the democratic process, especially regarding the issues of nuclear waste.

In what other issue do we talk about hundreds and thousands of years with difficult terms and many unsafe and questionable issues in which methods and technique and technologies are totally untested? In what other issue do the researchers have so many different opinions, for example, regarding cracks in the mountains, on the glacier? And will the cows really be able to graze on top of deep storage areas? These issues have come up all the time. Will people want to live close by to such areas? The questions are many and difficult to be answered. How can we trust that what is done is being done correctly?

My answer is to create credibility in the process and to allow all of those who want to express themselves to do it. All questions are important just because they are being asked. Make sure that those who answer take the questions seriously and give answers to them. Do not give up before the answers are clear and one has understood the answer.

So here I declare COWAM conference open and once again warm welcome to all of you.

MR. GILLES HERIARD DUBREUIL

Good morning ladies and gentlemen, I am Gilles Hériard Dubreuil, co-ordinator of the Cowam programme. Before starting the meeting I would like to give you some information about this project. First of all, I would like to thank the Oskarshamn city and its Mayor for hosting this meeting and to tell you that I am very happy that this meeting and this project can take place. It required a lot of efforts from many people, many partners, and I hope it will meet expectations up to the many efforts which were put into this project.

First of all I would like to give you some information about the background and the different steps of preparation of this project. COWAM means *Community Waste Management*. The background of the programme is that in 1998-99 different experts and individuals working in the nuclear waste management field realized that this was a global problem looking for a local solution. Therefore there was a need for a sound contract between the national community and a local community. To reach such a contract there is a need for mutual trust between the national community and a local community. But in the last decades nuclear waste management was very much designed as a technical option. Gradually it was acknowledged that it was not only a technical problem but also a political, social, ethical issue with many complex dimensions. There is an increasing need to have society, and notably directly concerned local actors,

involved in the decision-making process. In the past, when nuclear waste management was seen as a technical issue, the local communities were only involved in the last stage of the decision-making process when almost all components of the decision were already fixed.

In 1999 a group composed of representatives of a local community (Oskarshamn), national authorities (HSK in Switzerland and the special advisor to the Swedish Government on nuclear waste issues), the French nuclear operator (ANDRA), and also of experts from Belgium (SK-CEN), France (Mutadis, CEPN) and UK (NRPB) prepared and proposed a project to the EC Research Directorate with the objective: to improve the decision making process in nuclear waste management at the local and regional levels. The project was accepted as a European Concerted Action. It is designed as a 3 years collective reflection process (2000-2003) developed in 4 seminars, each one being located in a local community involved in Cowam. The budget covers part of the organisation of the seminars and project management.

The idea is to set up a collective learning process based on existing experiences of decision-making processes as regards nuclear waste management in Europe with a wide range of European participants, all concerned by or involved in nuclear waste management : local communities and NGOs, operators, national authorities and experts.

The objective of COWAM is first of all to improve the quality of decision making at local level in nuclear waste management. I must add that all of you are involved in or concerned by waste management, but with different types of waste and technical options. The issue is not to determine which option is the best for a particular type of waste, but rather to discuss the quality of the decision-making process from the local level viewpoint. The question for Cowam is not to promote one option or another, but to consider, for instance, if and how the local community is involved in the discussion of the technical concept. The relevance of technical concepts is a matter for discussion in each country according to the national context.

Once this project was validated and accepted by the European Commission, the Cowam steering committee first met in september 2000. Its members felt then that there was a real need to address the issue of decision-making processes regarding nuclear waste management directly from the local point of view. We observed a deficit of local communities' networking in nuclear waste management at the European level. Therefore, we decided to give Cowam additional goals, and to make a specific effort to give European local communities and NGOs the opportunity to represent their own views in COWAM, and to create favourable conditions for local communities to network at the European level. This is the reason why we decided to turn this workshop in a more ambitious project, a *European platform of dialogue* at first for local communities and NGOs involved in nuclear waste management. Delegates from many European countries attend today this seminar : participants come from Belgium, Finland, France, Germany, Spain, Sweden, Switzerland, UK. There is a strong participation of local communities and NGOs (75% of the audience) and a panel of national authorities, operators, experts. Cowam is actually not a network of local communities. It is a platform of dialogue for the various actors involved and concerned in nuclear waste management.

The next steps of COWAM are two seminars in 2002. The first one will take place in France, in Verdun (Meuse) near Bure Laboratory on February 28, March 1st and 2nd, 2002. The second one will be held in Switzerland, in Wellenberg on the 12-14 September 2002.

A few words about this Oskarshamn seminar. When we decided to raise the ambition of the Cowam programme, it became clear that the EC funding was not able to cover all the budget required. Thus, the Oskarshamn seminar was funded by the European Commission Cowam budget (about 30%), a panel of Swedish sponsors (Oskarshamn municipality, Ministry of Environment, SKI, SSI, SKB; about 50%), and ANDRA.

The case study sessions will be presented by different stakeholders in order to give you a view on the complex dimension of the problem at stake in the decision-making process. The seminar will begin with a UK case study. More specifically, we will have a presentation of the Sellafield case, with all the actors involved in the public inquiry which took place in 1995. We will have then two Swedish case studies : Oskarshamn and Tierp. After each case study session, you will have a working group session. Thus, you will have three working group sessions of 90 minutes to discuss and exchange views on decision-making processes regarding nuclear waste management. We ask you to reflect on the case studies but also to take into account in your reflections your own experience of nuclear waste management decision-making processes. You are expected to produce, in the end, a first list of criteria to assess the quality of decision making process. A reporter is identified in each group and he/she will bring the conclusion of the group in the plenary session tomorrow in the end of this meeting.

Guidelines for the working groups are proposed in the folder which you received. The concluding session will also include a panel discussion and I ask the members of this panel to follow the whole seminar, keeping in mind that we expect their views on the issues discussed in the working groups. I shall now leave the floor for the presentation of the UK case study. Thank you.

First case study – Sellafield, United Kingdom

MS. SHELLY MOBBS, MODERATOR

Let me introduce myself. I am Shelly Mobbs from the National Radiological Protection Board in the U.K. The first case study is on the Sellafield case. This is the application by Nirex in the mid 1990s to build a rock characterisation facility at or near Sellafield in the U.K.

Just for a little bit of history. The plant application was put in, then there was a public inquiry to decide whether or not this rock characterisation facility should go ahead. Three speakers will give their viewpoint on the decision making process, how this decision was actually taken.

I would like to introduce John Hetherington from Cumbria County Council. This was the county council that was involved in the planning application and this is where the site is located. Then Rachel Western from the Friends of the Earth who presented the case against the building of a rock characterisation facility will give her views. Finally Chris Murray from Nirex will present the industry's viewpoint.

What I would like to do in the session this morning is to start off with the three presentations so that you will get a complete idea of the different view points, and then we will move into the plenary discussion and have comments from the floor after the three presentations.

CUMBRIA COUNTY COUNCIL'S EXPERIENCE AND PERSPECTIVES ON THE DEVELOPMENT OF NUCLEAR WASTE DISPOSAL FACILITIES

BY MR. JOHN HETHERINGTON, CUMBRIA COUNTY COUNCIL

Good morning. I am John Hetherington from Cumbria County Council. What I want to try and do is share with you today a review of the development of radioactive waste management in the U.K., and how that particularly played out in terms of the early development of policy, the role of advice to Government and the effect of the changing Nirex programme. Then I am going to give you a summary of the Nirex RCF inquiry arguments and tell you what happened back in 1997 about the Government's decision to refuse planning permission for the proposed Rock Characterisation Facility near Sellafield. And then I am going to talk briefly on some of the recent dialogue processes that had been happening in the U.K. The council has been engaged in those processes even since, of course, the refusal of the planning application. Then I will share with you the views that the County Council adopted a little while ago now about our perspective as a local community affected by these proposals in terms of the future U.K. radioactive waste management.

The development of UK national policy

First, I want to give you an overview of the development of U.K. national policy for radioactive waste management. The tone of U.K. policy was actually set way back in 1986 in a White Paper, which even then expressed the view that there should be a commitment to public involvement in site selection and the expectation that the industry will pursue a policy of openness and consultation. So on paper, there was in the U.K. a long-standing commitment to openness and transparency. In practice, however, policy in the 1980s and 1990s were strongly influenced by the practical difficulties that Nirex were having in developing and delivering an effective programme.

Key milestones in the U.K. included, first, the termination of the shallow sites programme which was looking at locations for low and some intermediate level waste to be disposed of at surface. And secondly, Nirex began really quite effectively a consultation on geology and siting, but then it went behind closed doors and communities were not involved in that site selection process. And Nirex went on to make a decision to focus on Sellafield in 1991. Later on, only two years after that, they introduced the concept of a Rock Characterisation Facility which had not been part of the initial thinking. The Nirex approach from 1989 then was largely pragmatic. It was about reflecting past and ongoing difficulties as

the programme developed. At least this is the perspective that we, in the community around Sellafield, felt was the case.

Some key points from this period. The site selection process was never fully documented and made public at the time, and that was a key concern. The RCF stage, the rock characterisation facility stage, was seen to be added, it seemed, as an unforeseen step compared to the original thinking. There was no regulatory involvement in these key stages, so no advice was available to local communities from the regulators. In effect, all this led to Nirex failing to win support from the local planning authority in Cumbria, particularly on this question of site selection.

Why was Sellafield selected?

The main lessons about openness originate from that original 1986 white paper and a RWMAC/ACSNI study. RWMAC (Radioactive Waste Management Advisory Committee) and ACSNI (Advisory Committee on the Safety of Nuclear Installations) are the advisory bodies in the U.K. who give advice to Government on aspects of radioactive waste management. They made a joint study which also concluded that there was a need for openness in taking a stepwise process. I will mention more about that later, but again that was ignored in the run-up to the inquiry that was held in the U.K. on radioactive waste proposals at Sellafield.

All these concerns resulted in planning permission being refused and the major planning inquiry held, and the comments and objective views were confirmed by the decision that was then taken by the government. The inspector recommended that permission should be refused, and this was backed by what was then the previous Conservative Government. The Labour Government that came to power 5 years ago also had to rethink. There has been this extended period of rethinking. As a result, we have had the House of Lords' Report which was published in March 1999, we have had the Government Consultation Pack which is brand new, it was only launched last week, and then we have to make suggestions within that consultation pack. But we are actually in for a quite long programme now with further widespread consultation in the U.K.: a research programme on feasible options going through from 2002 to 2004, a launch of a further consultation paper in 2005, and perhaps some primary legislation in 2006-7.

RWMAC/ACSNI Study Group (1995) : the democratic imperative

I just would like to step back for a moment to that study group that I mentioned. Back to 1995, it is interesting that lessons were already being learned as far back as then, in fact before the inquiry took place. And I think the new consultation should not lose sight of the valuable things that were said in that study. The group was established in July 94 but reported in March 95. It was chaired by Sir John Knill, who was then the chair of the Radioactive Waste Management Advisory Committee, which, as I said, is an advisory body to Government. It involved the local hearing in Cumbria, which was really our first local chance to say anything about issues like the site selection process. And so the Cumbria County Council and the Borough Council, which are the local authority for the immediate area around Sellafield, both gave evidence to that hearing. The hearing covered the approach to site selection and the criteria for ensuring protection of public health. The outcome was said to have informed the previous Government's 1995 white paper. Although, in practice, those key concerns about the process then being followed were actually largely ignored.

The key point is that issues that are now included in the Government's new consultation are not actually new in the U.K. context. They were covered in that RWMAC/ACSNI study group report, and that predated both the 1995 white paper and the RCF inquiry. Of course what it was about was part of the information available to the inspectors when they took their decision.

So again just to very quickly run through what that study concluded. Firstly, they concluded that the planning and regulatory systems were poorly related although it was accepted that both do have provision for public consultation. Secondly, it recognised that there is an inherent problem in the long time scales for any radioactive waste programme, and that is a problem for all our different programmes; that the legislative background and the framework on which decisions are taken really lose track with the very long time scales of these things. Thirdly, it recognised the current procedures in the U.K. were inadequate for any discussion of site selection. Fourthly, it recognised that local people needed to be involved and supported, which was a key conclusion. And fifthly, that "there is considerable scope for improvement". That was a quote from the report. The study group went on to propose an 11-stage approach with an independent commission. They noted that the issue which was raised over and over again in the hearing was the need for transparency in the site selection process, and now of course we

are hearing this word transparency all over Europe.

There is a quote that I often enjoy including in presentations like this, and that was included in that report. This is a quote of Thomas Jefferson who said: "I know of no safe depository of the ultimate powers of the society but the people themselves; and if we think they are not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion".

Radioactive Waste Management Responsibilities in the UK

I was asked to clarify what for some of you will be a complicated set of responsibilities in the United Kingdom. I do not know how legible that is, but basically I will try to summarise it (see opposite table). There are three main U.K. government departments who have an interest in radioactive waste issues as well as the devolved administrations now operating in the U.K., in Scotland, Wales and Northern Ireland. In the U.K. the department DEFRA, which is the Department for Environment, Food and Rural Affairs, is responsible for radioactive substances, including the new consultation document, and DEFRA is also the sponsoring department for the environment agency which licenses the operation in nuclear facilities in relation to their reflex on the environment and public safety.

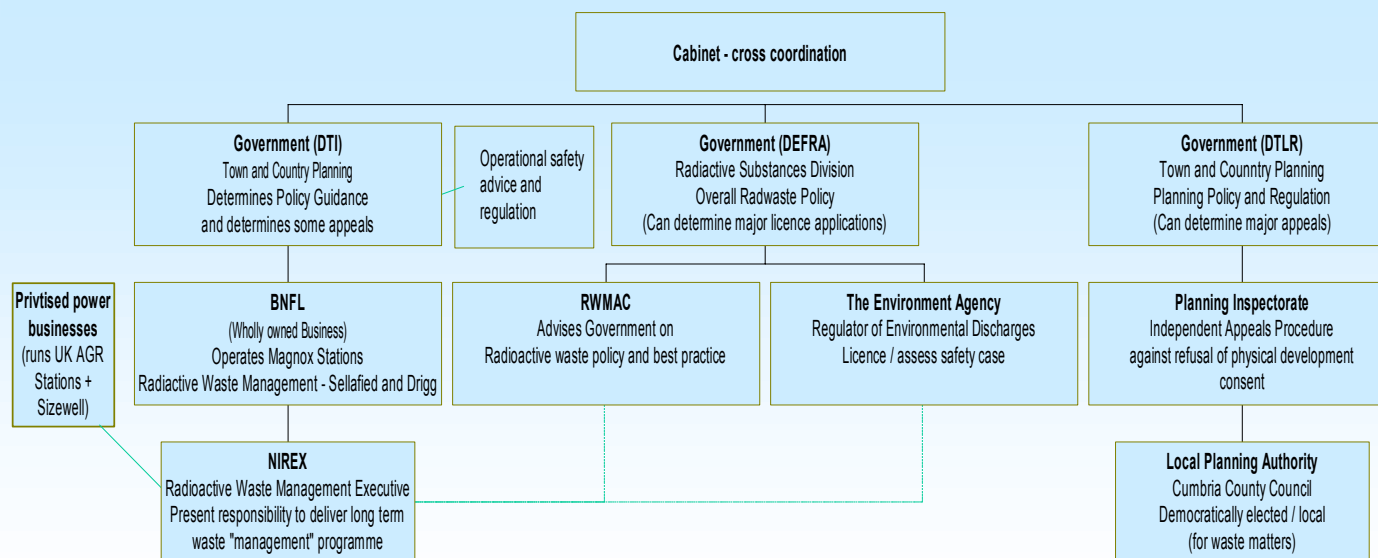
There is also - and I think this is often forgotten - the Department for Transport, Local Government and the Regions, which provides the overview of the planning system in the U.K.. Permission to develop facilities through radioactive waste disposal rest with county councils, while district councils are the development control authority for all the other nuclear industry development. Planning for physical developments, is, in the U.K., the responsibility of local government. But there is a power to hold the local inquiry before an independent inspector and the final decision can be called in by the minister, which is what happened with the Nirex proposal. And finally, there is a third strand in all this: the Department for Trade and Industry (DTI) is responsible for industrial policy, and holds the interest in both BNFL and Nirex who are within the public sector. The facilities operational safety also is subject to regulation by the Health and Safety Executive (HSE), which is linked in with that department. It is all together a complex picture, and the different roles can get quite out of step, which I think is partly what happened in relation to the Nirex proposal and still remains an issue for us in the U.K., bringing together national and local chains of interest in reaching a decision in all these areas.

The Report of the House of Lords Select Committee on Science and Technology

I want to now move on to fill out a bit more information on a key step in the development of the U.K.'s position after the RCF inquiry. The committee of the House of Lords on Science and Technology looked at the issue of nuclear waste management immediately following the failure of the Rock Characterisation Facility planning application. It reported in March 1999 on the general question of the management of nuclear waste. And its key conclusions were that the problem is really with the past legacy of radioactive waste, and that the present management approach is fragmentary. The report seemed to favour only two approaches, either deep depositories or long-term surface management. And the committee thought that more than one repository may be needed in the U.K. for intermediate and high level waste. They felt that public acceptance of a national plan for management is essential. They recognised that openness and transparency in decision making are necessary, and they suggested - and this was unique for the first time in the U.K. context that this sort of proposal that happened - that there could be and should be local compensation for blight and support for communities involved in hosting a repository.

They also went on to recommend a number of key points, that the government should quickly develop a comprehensive policy, that the policy must be subject to wide consultation, that a "nuclear waste management commission" should be set up with an open approach, that a new radioactive waste disposal company should be formed, but that Nirex and RWMAC should be disbanded. They said that a comprehensive research programme is now needed and they proposed that any future process of selecting sites should be open, transparent and involve Parliament, following a public inquiry, with the final decision taken by the government minister. They also made a few further helpful suggestions on issues like having a segregated fund to deal with the liabilities question, that there should be a new low level waste site planned before Drigg, which is the U.K.'s present low level waste site, closes in about 50 years, and that there is a need for a clear policy on management to plutonium.

Radioactive Waste Management Responsibilities in the UK



Background to the Rock Characterisation Facility (RCF) Inquiry

Before moving onto what we think in the community around Sellafield, it is worthwhile looking back to why the rock characterisation facility proposal failed. Before we can do that, we need to consider the background to the RCF Inquiry. Nirex initially argued that site selection and safety assessment were not relevant to that planning inquiry, which is about the construction of the rock laboratory. They have some support in that view in the 1995 Radioactive Waste White Paper, which implied narrow terms of reference. However - and I think this is one of the strengths of the British inquisitorial and indeed confrontational planning inquiry system with its independent inspector - the inquiry actually brought all the basic background and issues out into the open, it provided an almost complete review of what Nirex had done up to that point. The inquiry was held in two parts. Part A dealt with the impact of service development on the countryside and the national park which is adjacent to the proposed site, and part B dealt with the technical issues, the geology and the safety assessment and site selection.

The RCF inquiry - the NIREX approach

Nirex argued that the impact of the surface development was small, but that it was needed in the national interest to inform the companies' go/no go decision on whether to proceed with the site. They felt and tried to demonstrate that the site actually showed good promise, and they argued initially that the alternative sites are relevant only to the full repository inquiry which would be held perhaps 10 years or even longer after this initial inquiry. But out of the holding of the inquiry, there was a number of useful documents that entered the public domain. Nirex published a preliminary safety assessment, Nirex 95. They released during the inquiry a full account of the site selection exercise, the analysis of the alternative sites. It was a MADA, multi-attribute decision analysis process, but still in the U.K. those alternative sites have not been named, the communities do not know that they were in the firing line at that stage back in the late 1980s. Nirex argued forcefully that the Nirex Board were right in 1989 to focus first on sites that were familiar with the industry.

The RCF Inquiry - the County Council case : "A poor site - chosen for the wrong reasons"

The county council case, which was also supported by the Borough Council, was that the proposed site was basically a, "poor site chosen for the wrong reasons". We argued that it was a poor site because of the adverse visual effects, which was only acceptable if there was an overriding need. However, we tried to show that the prospect for a safety case was significantly in doubt. We said that the location did not offer a simple and predictable geology and that the proposals relied on dilution of the radio-nuclei as they entered the environment into an overlying aquifer. We felt that the risk predictions were close to the risk target. We recognised and drew attention to the fact that there were rapid return times to the surface because of the faulting in the underlying bedrock, and that risk arguments were therefore vulnerable to intrusion scenarios such as the drilling of agricultural wells. We also even got into technical details such as criticising the critical group definition.

In other words, what we as a local community had to do at community expense - because the regulators hadn't been involved - was to play the game of looking at the weaknesses in Nirex's case. In our view, we found over a number of years of involvement many serious areas for concern. But at root, this was underpinned by a lack of trust in the transparency and openness of those key early processes on site selection - the Nirex Board decision to *decide* on Sellafield and then *defend* it, even as doubts arose.

So a key aspect of our case was that Sellafield was chosen for the wrong reasons. We accepted in the inquiry that it was appropriate for Sellafield to be included in the short list. It was near to where all the waste, or the vast majority of the waste is stored, but we felt that the MADA work that recommended a "basement under sedimentary cover" site had been ignored by the Nirex Board's failure to include a site with a better margin of safety. That should have been made public and included in the public short list. We argued that fear of local opposition in sites around the country which actually had a margin of safety compared to the sites that were being investigated was not a valid planning consideration and that you shouldn't rule things out because you are concerned about how people might react to them. So in other words, we felt that the whole history of site selection was not transparent and that this was contrary to the plain face of government policy.

The Inquiry conclusions

What happened, how did our case get on? The decision to refuse was announced on the 17th of March 97. Planning permission for the RCF was refused because of poor design, layout and adverse impact on the national park, but the key things related to the part B of the inquiry. The Secretary of State was also concerned about the scientific uncertainties and technical difficulties, and he was worried about the Inspector's conclusion that, "the site is not suitable and that the investigation should move to a more promising site elsewhere". In other words, he accepted the key arguments that the local communities looked forward. He also made some other key points. He noted that the Technical Assessor and the Inspector were strongly critical of Nirex "over-optimism", and he noted with some concern that the site selection process had singularly failed to impress the Inspector in terms of its transparency and the rigor of its scientific logic. And he accepted the need for full disclosure of site selection in any future rock characterisation facility stage.

What happened since ?

What happened in the U.K. after that inquiry? First, the RCF Inquiry result called into question previous approaches. It made clear the cost of failure to engage local communities effectively. Second, the House of Lords' Report that I have mentioned was produced to inform future government consultation, and that much-delayed consultation has just been published last week, as I said. That delay in moving forward in the U.K. has meant that new dialogue processes could begin to be tried out. In particular, stakeholder dialogue has reached similar conclusions. Any future process must be transparent and open, not pre-judged methods or siting options. It is interesting to note that the citizens' panel that was set up concluded that "radioactive waste must be removed from the surface and stored underground, but must be monitorable and retrievable. Cost cannot be an issue". They also noted that at present - and this was at the time I think an understatement - "at present there is a lack of trust and understanding and public awareness must be raised. The public needs to be fully informed of the problems and solutions available. Decision making must be open and transparent."

What happened since? BNFL's stakeholder dialogue also has been under way for two years : the "Waste Working Group" agreed that passively safe, monitorable and retrievable interim storage should be ensured in the U.K. for all waste. That was a helpful contribution out of a dialogue process. Nirex has - as we will be hearing from Nirex themselves - carried out a fundamental review of their approach. I think we are impressed in the communities around Sellafield that Nirex now accept that the programme was driven too quickly and was too focused, that there was a lack of openness, that alienated even natural allies, that Nirex recognise need for stakeholder engagement, that Nirex was no longer seen as the solution but as part of the problem. Nirex still feel that the science case (set out in a further science report they did in 1997) confirms that there is potential at Sellafield. Nirex has launched its transparency initiative and its new underground waste management concept, which is based on retrievability for hundreds of years, monitorable with closure options open to future generations. So these have been significant developments.

Cumbria's "management" approach

To conclude really, taking all these developments into account, I find it is gratifying that Cumbria's management approach put forward at the inquiry and subsequently still fits the bill. Cumbria County Council accepts, alongside our District Council colleagues, that we need to properly manage waste arisings in the U.K. After all, we are the host to the surface stores for intermediate and high level waste at Sellafield and low level waste at Drigg, and that is going to continue for at least the next 30 years. On balance, we think locally that it is better to have this period of storage than proceed at a poor site that was chosen for the wrong reasons.

The Cumbria County Council suggests that surface storage is now the only realistic medium term option. It is technically well demonstrated and features in industry plans, it is virtually cost neutral as noted in the 1995 white paper, and it is unlikely at the moment to be publicly contentious. We did not support the House of Lords' assumption that deep disposal is the only solution, but we agree with much of the rest of that report, and we think, for practical timing reasons, that no solution is now possible in the U.K. In the medium term. We share the widespread view that following Government consultation, an agreed process must be developed with all the different players involved, leading to trusted advisory and implementing bodies and eventually to a new legislation. And so Cumbria County Council has already

welcomed, in a statement it made last week, the Government's 2001 consultation, and it is committed to seeking local views in its community.

The components of a future strategy

We think that what is needed is a flexible strategy based medium to long term on effective *management*, and I highlight there the options that should be looked at; the consultation paper mentions more. So the essential characteristic of the County Council's proposed approach is a publicly agreed sustainable radioactive waste management strategy for the U.K., which can be flexible to changing circumstances and knowledge. And we need to build on that knowledge, but there are lessons that can be taken into account in any future site search :

- Site selection needs to be a fully open process
- The process should be driven by clear and agreed scientific (geological and safety) criteria
- There should be open review, involving local communities as site selection narrows from many options and (named) sites to specific target communities
- We need a properly financed independent body working with affected local communities throughout.
- We must improve interlinking of planning and regulatory procedures, with the Environment Agency developing a clear role and capability from the outset of the selection process

Conclusion

Finally, our view is that Nirex failed to win planning approval for the RCF because of the inherent weaknesses of the site, in particular the lack of early involvement of the regulator and local communities in those initial moves towards a deep waste repository at Sellafield. As a result of this, we need this open process in the U.K., and in the longer view, we also need an approach that includes all the communities, and with luck, the U.K. has another chance to get the process right and we in the community around Sellafield and in Cumbria as a whole will do our best to make sure that it happens.

FRIENDS OF THE EARTH AND THE NIREX RCF INQUIRY

BY DR. RACHEL WESTERN, FRIENDS OF THE EARTH (SPEAKING IN A PERSONAL CAPACITY)

Thank you very much. I am actually speaking in person, partly because I also have another hat. I do some work with Nirex now. Thank you very much for the opportunity to speak here today. Much of what I would have said about the context of the Nirex Inquiry has been covered by Mr. Hetherington and will be covered by Mr. Murray of Nirex, so I will not repeat it. I will talk about the role of Friends of the Earth at the inquiry. Friends of the Earth and Greenpeace, another organisation, had a major role to play in the Inquiry.

My personal role in the Inquiry began in 1989 when I was volunteering at Friends of the Earth and was given the brief of doing some research on disposal. At first, I was quite sceptical. Should we really put hurdles in front of the safe management of nuclear waste? But the first article I read was an article in Nuclear Engineering International, which went into detail about the scientific hurdles that stood in front of nuclear waste disposal, and my scepticism soon receded.

At this stage, 1989, Nirex had been forced to leave the sites around the country where it first went. After a huge public consultation it settled on Sellafield and Dounreay. The actual result of the consultation that they had done had been that people wanted storage and not disposal, but Nirex ignored this, and in March 1989 prepared a document which was preliminary information on why both Sellafield and Dounreay had been selected. It was clear that for political reasons, it was only a matter of time before Sellafield was finally selected. In the context of the Scottish devolution debate, there was no way that Scotland would end up with English waste. Sellafield was selected because it was believed that there was a measure of local support. This meant that it was believed that because people relied on the nuclear industry for jobs, they would not show too much local opposition to a repository. It was certainly true from Friends of the Earth's point of view that the approach that we needed was different. Rather than a public profile campaign on its own, we needed to put more emphasis on behind-the-scenes lobbying and research. We did public work for our local groups and I worked behind the scenes with a local politician, highlighting the remaining scientific uncertainties that needed to be addressed.

I used to phone the politician and talk through with him the scientific problems and send him the original papers so that he could talk first hand from what he read himself. I was doing my Ph.D. on Nirex and I read through the safety studies research. These studies identified problems in virtually every area of the research that Nirex were doing. The basis of the safety studies research is that it is possible to predict the quantity of radio-nuclides that would migrate away from the repository once they were buried. This demands a detailed chemical, geological and engineering understanding of the way that the radio-nuclides behave. A cursory reading of the safety studies that had been done showed that Nirex simply did not have that understanding. All of the research called for more data and for more research to be carried out. At the same time, Nirex's Public Relations department shouted out "Safe for all Time", that there were no uncertainties and that they had the understanding for long-term predictions to be made. Nirex's problems were made worse by the particularly poor location of the Sellafield site. Nirex had opted to bury waste deep in the basement rock. At Sellafield, this was volcanic rock, of the Borrowdale Volcanic Group, which was particularly cracked and faulted. These cracks would provide fast pathways for the leakage of radioactively contaminated water. In addition to the cracks, there was a linkage of the basement rock to the Lake District Hills, which provided a driving force in the water from the pressure of rain water at the surface.

Finally, the fact that Sellafield is next to the sea and so next to a block of salty water meant that fresh water from the Lake District was hitting the salty water and effectively bouncing back up to the top. This meant that contaminated water would go directly back up to the surface, which was the last thing that anybody wanted. Clearly Sellafield was a very poor site. This became clear at an early stage, but Nirex were determined to play on. The imperative to start the site selection programme was driven by the push for new reactors. The privatisation programme meant that people realised that nuclear reactors were simply too expensive to build, but despite this, Nirex decided to carry on with their plan to build a repository. The final announcement for Sellafield over Dounreay came in July 1991, and the problems associated with Sellafield appeared in the press fast. Ultimately, Nirex opted to abandon the proposal

for a repository straightaway, but instead modified that for a rock characterisation facility.

Friends of the Earth saw that simply as a means of getting underground without going to the trouble of providing a rigorous safety case. We worked closely with our local groups and they made a Trojan horse that they towed around. Gosforth Action Group and Cumbrians Opposed to Radioactive Environment also worked on that campaign.

When it became clear that there was going to be a public inquiry on the RCF proposal, we set about getting independent experts to act as our witnesses. This proved to be extremely difficult. It was not that we could not find people who agreed with our case. The trouble was the funding factor was heavily against us. Nirex had a big research budget. They spent 450 million pounds in total, and I was told that at one point the research community either had their nose in the trough or wanted their nose in the trough. However, I spent months on the phone and finally identified 7 men who were willing to act for us. We also worked with a lawyer John Popham, who was able to give us expert advice. We got a grant of 50,000 pounds to pay for half of this and postponed our food campaign for 12 months to pay the remainder. Thus our total budget was 100,000. Nirex, I believe, spent 10 million on the inquiry. Preparation on the inquiry was very intense.

Our 7 witnesses provided us with first drafts of the proposed evidence. We had allowed plenty of time for them to be edited and to match up the perspective of a lawyer with the perspective of an academic. I actually edited the first drafts at the Reading Music Festival lying on the grass. It was great fun to be an intermediary between all of the different perspectives on our team, and I think that was one advantage that we had, that we were poor. I will give an example to illustrate this.

Nirex had much more money than we had, and so could have a much larger team. This meant, it seems, that communication between different people was less tight and the conveying of precise meaning was lost. This influenced a key point in the evidence. Friends of the Earth argued that the zone of disturbance around the proposed of rock characterisation facility was not understood. We used as an example the Äspö Rock Laboratory here in Sweden where experiments had been done using the U.K. models to make predictions. The U.K. models predicted that there would be an increase inflow following excavation. This was predicted because of the expected increase in the width of fractures.

What was found was a decrease inflow which was guessed to be due to an increase in debris in the fractures. This was the so-called Zedex experiment. Nirex's explanation for the results of Zedex was inconsistent between two witnesses, which to Friends of the Earth was absolutely fundamental. Nirex had argued that the purpose of the RCF was to conduct experiments on the impact of excavation on flow. And if they did not even know or satisfactorily explain the basic data arising from the Swedish experiments, what hope was there that the data from a Sellafield RCF would be usefully applied? It certainly seemed to confirm the notion that the idea of the RCF as a laboratory was just a sham.

The seven witnesses that we had set out a case that developed from site specific Sellafield issues to generic issues that would apply whatever site was chosen. Nirex was visibly shocked when our evidence was presented, and they responded with a complete set of scientific, supplementary proofs. Luckily, these arrived just before the Christmas break and we were able to rebut them with a complete set of our own.

As examples of the pedantry of the whole process, I spent nearly an afternoon on a single paragraph of one from one Nirex supplementary proof, questioning such details as so-called new evidence, which was in fact only a change in publication date, and even alteration to some constants which are called constants because they are not to be altered. In response to the barrage of criticism which came from all sides - Cumbria County Council, Greenpeace, Friends of the Earth and a number of independent witnesses - Nirex adopted such tactics as refusing to make available the professional transcript of the inquiry and pressurising the regulator not to release data.

One of the questions put to me for this seminar was my opinion of the decision making process. Is the public inquiry a good way of making a decision? My Ph.D. was partly on the value of the Windscale Public Inquiry, on the decision to build the THORP reprocessing plant at Sellafield. Friends of the Earth lost that inquiry and THORP was built, but we won the Nirex Inquiry. Friends of the Earth were lucky to get a grant to take part in the Nirex Inquiry and lucky to prepare for it in advance. I was convinced that we would lose, however strong our case was, because the odds were so much against us. However, we fielded a strong academic body of evidence and an advantage of a public inquiry context is that it allows evidence to be gone through in a precise manner. This assumes an impartial inspector and it is very easy to be cynical from the outset and assume that a biased inspector has been selected for political reasons.

Brian Wynne at Lancaster University has written a book on the inquiry process called "Rationality and

Ritual", which argues that the Windscale Inquiry was likely done for show, to justify decisions that had already been made on the basis of large contracts. A major disadvantage of the inquiry is that it ties up the whole life. A major advantage is the close friendship it entails and the amount of fun it can be.

Friends of the Earth expected very little of the authorities at the outset of the inquiry. As I said earlier, I was convinced that we would lose. One important point is that the regulator had painted itself into a corner over participation. The small print of the law says that until Nirex actually asked to put waste into a hole, that hole is not actually a repository, then the regulator has no business regulating. This nonsense kept the regulator out of the public inquiry and it was up to Friends of the Earth to demand that the evidence that the tax payer had paid for the regulator to accumulate should be put before the inspector. On top of this submission, the Department for Environment refused to adequately fund the inquiry and there was no official transcript and generally poor resourcing.

Friends of the Earth's attitude to the operators was one of complete derision. They appeared driven by a legal mentor with very little conception of the hard scientific realities of what they proposed. Apart from the excavation damage, another aspect of our evidence was the need to gather an adequate understanding of the baseline flow, the flow of water in the rock before an RCF is constructed. Nirex dealt with this superficially at the inquiry, and it was not until the leaked memo appeared just before the decision was announced that the full ramifications of the Sellafield complexities became apparent. Friends of the Earth's expectations of the Cumbria community were limited. We expected that they would be severely cowed by their reliance on the nuclear industry. However, the local council proved extremely able to pull together an excellent case.

So where are we now? Things are very different now. Personally, I am working as a research associate with Lancaster University in a project with Nirex to improve information resources. Nirex has altered its staffing and its key personnel with core values that will go a long way towards gaining respect and cooperation at the next stage of waste management.

Let me leave you with two thoughts. Firstly, the Inspector at the Inquiry concluded that there was a long way to go before the scientific case for disposal could be made. Secondly, I will show you a picture. It is a Scandinavian painting that I took a detour to see in Oslo. It is called "The Sick Child" and it is by the Norwegian painter Edward Munch. Site selection is an issue because of the possibility of sickness. The nuclear industry harbours inherent dangers. We must not get lost and forget that. Thank you very much.

NIREX AND THE RCF INQUIRY

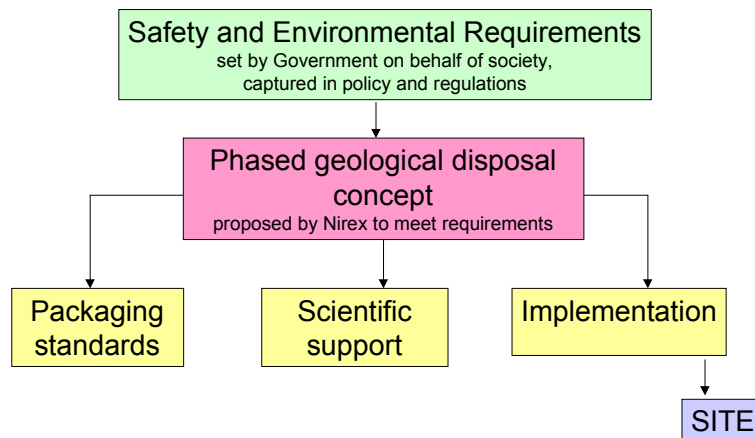
BY MR. CHRIS MURRAY, NIREX

Good morning. My name is Chris Murray, I am the managing director of Nirex. I took over that job in 1998 after the rest of the senior management were moved out, as the phrase is. I was the last one left standing. The task that I was set was to try and maintain the scientific core that was within Nirex and to continue to do certain key tasks that are still required. But above all, I was asked to try and learn the lessons of what had been a huge policy failure in the U.K., the size of a shock that was felt when we lost that public inquiry. There was an enormous setback in terms of government policy. That is how it would seem at the time. I think now that most of us see it as a fortuitous thing, something that allows us to stop and draw back and learn essential lessons.

I begin by giving you a little bit of context (see opposite figure). If you start at the top of the diagram, the Government on behalf of the people is trying to put in safeguards to protect in the long term against the effects of radioactive waste, and that results in regulations and targets. Concepts are then developed to try and meet these targets. One of the concepts would be to fly the waste into the sun, put it in the deep ocean, store it on the surface. The one that we did most work on was a phased geological disposal, and that required a large amount of scientific work. Rachel has referred to that, that scientific work in itself is highly contentious, but it also involved in setting standards. And we set standards in order that the concept will work, so that the targets can be met. These packaging standards are one of the most important things that we continue to do. If you go to the other side of the diagram, the implantation side is to try and find out room for that concept, and that is the process of finding a site. That is where there was a tremendous failure in 1997.

In the U.K., fuel manufacture and uranium weapons manufacture produce a substantial amount of intermediate level waste, much more I think than in many of the other European countries, except perhaps for France. We come in at the point where everybody agrees something has to be done. You must take the raw waste and condition it, put it in a more passive state. Nirex's role continues to be that of setting standards at that point. These standards relate to the concept in the long run, and we intervene in the process to try and set these standards so that the long run is taken into account at that point, because that really is the last point at which we can intervene. People then come to us like BNFL with proposals. They get us standards, they then want to deal with the technician. They come to us with a proposal and we look to see how it works with concept, and if it is, we give them technical comfort. We give them a letter basically that says : this should be okay against the concept.

Previous speakers have referred to failures in the siting process and we could also talk about the



contentious nature of the science. But I would like to talk today about these failures. When you look at the list below : 1970s, 1980s, 1990s, there is clearly something amidst. There is a huge problem in the U.K. It is not just to do with intermediate level waste. It referred to high level and other waste. The only waste that has been successful in disposal of is low level waste.

- 1970's
 - Geological disposal of High Level Waste
 - Sea disposal of Intermediate Level Waste
- 1980's
 - (Nirex formed in 1982)
 - Geological disposal of ILW
 - 1987 Nirex began new search for deep repository
- 1990's
 - 1989 Sellafield and Dounreay selected
 - 1991 Concentrate on Sellafield
 - 1997 Investigations "wound up" following refusal of RCF planning permission by Secretary of State

John Hetherington mentioned the conventional planning reasons given for the refusal of the planning permission in 1997, the implications between the RCF and the repository and, above all, the site selection process where there was a lack of transparency. We have looked at many, many aspects of what we did on the processes surrounding that and what we have tried to do is prove beyond doubt, and we believe that the lessons can be grouped in three ways, under process, behaviour and structure.

Lessons in process

What I would like to do is just run quickly through these with you as a kind of backdrop to your discussions today. In process, one of the very difficult things in the U.K. was there was no clear mark that people could refer to. Nirex could be characterised as popping out of the bushes ever so often and people didn't know what the process was going forward. There was no clear road mark, no clear decision points.

There were difficulties also as regards the legal issues between the RCF and the repository. Nirex had tried to separate the two. It is quite simple, you cannot do that, you always have to look at the whole picture. John Hetherington and Rachel Western have referred to the Government advisors, that they lacked influence in our view, they were not played in strongly enough. The regulators were not involved sufficiently.

I know that in Sweden, the regulators were actually in the same position. The trouble with the Nirex project was that it was a concept, it did not exist in a physical way, and the regulators had a problem dealing with that. Now I know that in Sweden they took a conscious decision that they had to be involved. That did not happen in the U.K., and we are hoping that that will happen in the future. Then there is the question of the role of the waste producers who own Nirex, and certainly there was insufficient account taken of stakeholders' views.

In terms of process, the relationship between the U.K. as a whole and any potential host community it is not clear, and this does not just apply to Sellafield. Again reference has been made to this, what is really an unspoken contract. What we think was it was certainly unspoken. The jobs were there, therefore the waste should go there. Now it is a kind of unspoken deal that was on the table. But of course that is simply not a tenable position.

Lessons in behaviour

In terms of behaviour, we accept that the programme was driven too quickly. It was done for the best of reasons. In the eyes of the Government, they wanted a solution. The industry wanted a solution. And we adopted a just in time approach to the science. What that meant was we made assumptions that we would not be asked questions about the repository because that was a way down the line, and in fact we were. As Rachel Western said, there was a huge problem at the inquiry.

I talked earlier about the implications of the relationship between the RCF and the repository. It was simply not tenable to do what we tried to do, to separate the two. And there was also this business about giving information to people but not engaging in dialogue with them. It has to be said that we did not respect local views sufficiently. And I would compare this with BNFL, who have a much better record with that regard. Also Nirex relied on government policy to see them through. So we were saying: It is Government policy to do this, you really have to accept it. That is put in rather simply, but that was the end result.

There was a lack of openness. Nirex itself came from the nuclear industry which is notorious in the U.K. for being very closed and very secretive. Big efforts have been made by the likes of BNFL to change that and we ourselves are trying to do that, but there was insufficient clarity of what was being done and why, and we were very slow to publish results.

Rachel talks about the difficulty in getting information out of Nirex. Not all of that was to do with being secretive. Some of it was, I believe, that our science people had, that accuracy was all, and that you had to get things finished before you could publish it. All of that slowed down the release of information. We certainly adopted a legalistic approach. That tale that Rachel Western tells about refusing to give anyone else the transcripts of course is an extreme embarrassment when we think about it now. The end result was we alienated even lots of our alliances.

Lessons in structure

In terms of structure, there was a problem. People talked to us and said: You simply are a tool of the industry. The industry needs Nirex to succeed in order that THORP can be credible, in order that the privatisations can take place. The relationship between what follows after Nirex is a big question for the future, because Nirex will change, it will become something else. Certainly this lack of clarity of the regulatory role is a key part of the problem.

Lessons : conclusion

At the end of the day, we came to the conclusion that this was not simply a scientific problem, that actually we were talking about ethical issues, and time and again, as we examined what we had done and as we looked at the processes, we came back to making statements about the values: Why is this right? Why is that wrong? And we came to the conclusion that that is hard, this is an ethical issue. The waste exists whether you build new power stations or not. There is a bigger legacy in the U.K. whether you do more reprocessing or not. There are credible options, and this generation should try and deal with it, but the big thing is it should be dealt with on behalf of the public. Why does Nirex exist? It does not exist for any other reason than to try and provide an environmental solution on behalf of the public, not on behalf of the industry, and that is the big change that has happened in our thinking. Now the industry owns Nirex, and that is a very uncomfortable thought for them. They wonder what is Nirex doing, when it thinks thoughts like that. At the end of the day, previous speakers have said, openness is key, there is no substitute for that.

Nirex perspective : process

The suggestion we have is that a stepped process is identified up-front and published. The policy framework needs to be looked at again. You need to look at national issues, not just the local issues. We think it is a mistake to try and deal locally with some of the issues. There needs to be a national policy on, for instance, the contract with the community. What kind of benefits should the community get, any community, if the repository comes towards them. There needs to be a view on vetoes whether that does not occur in the U.K. I know that it occurs in Sweden and I think also in Finland. A view needs to be taken up-front on that in the U.K., whether you accept volunteers, how you deal with planning

gain. Is the M6 motorway lying in Cumbria a bribe or is that something that is legitimate. People in London do not actually have the problem there on their door step. How do these things work? How do the efforts start up? We have actually commissioned work from an ethicist trying to look at that particular problem.

Moreover there is a need for checks and balances. Again this is a national and a local effort. There needs to be a review for the options. We need to get away from thinking that there is only one option. We need to look back and see what else is there. In particular, the one that we have done the most work on, phased geological disposal, needs to be looked at by an independent group of people to see just what the issues are that remain there. Is that a goer, is that a new goer? And we certainly need to look at the other options. In terms of site selection, and this is very important, stakeholders need to be involved in setting up the criteria by which any site would be chosen. That means local authorities and local communities need to play at the beginning, not at the end, and that level of involvement, we think, is very important.

Naming the sites. We have just been asked by again for about the hundredth time if we would name the 6 final sites that were under the list. We refused basically because we felt it would be unfair to them in the context that the whole process was going to start again. However, we now have a transparency panel that checks what we are doing and the person involved looked at them and the panel came back to me and said: "We agree with him. We think we should list the names of the sites. So would you kindly ask the Government if they will lift their ban on you releasing the sites". So that is what we have done. We are talking now to the Government to see what can be done in that regard. I still do not agree with releasing the 6 sites. I think it may be fair to release the last 50 sites or the last 100 sites, but the issue is ongoing.

Nirex perspective : behaviour

In terms of behaviours, there was something we could do ourselves and we took a commitment two or three years ago to make transparency a real thing inside Nirex :

- Make openness a core value
- Listen to people who have an interest
- Make information readily available
- Make traceable decisions

Now as you read down that list, these are all motherhood and apple pie. The real test is whether we do these things. I talked about a transparency panel we put in place : people will check that we are trying to do them. The last thing and most important of all is giving access to and influence on work programmes. That means getting people involved in the research that we are doing, not after we do it, but before we do it, so that when we run into a problem, we then try and bring in "review processes", where we talk through the problem, not the solution, with people.

An example of how we are trying to listen to what the people were saying is what is now called the phased disposal concept. Initially, you put the materials into canisters or cans to Nirex's specification. What we now believe is that that should be geologically isolated without doing in the backfill, so that the materials are retrievable and can be brought out again. When and if the society decides that they want to go to the next step, they would put in the chemical conditioning, they would put in the backfill, and then it would be a geological containment, as described previously.

Nirex perspective : structure

In terms of structure, we believe that a separate organisation to succeed Nirex is what is required. The reason I say that - and it may seem obvious to you that it is the case - is that in the U.K., part of the debate that is running at the moment is to perhaps put Nirex's functions back inside the industry. We believe that that would not be a reasonable thing to do. The waste has got a certain focus, it is a fairly long-term issue. Decision makers need to be able to see what the long-term people are saying about things. An example of that is dealing with the technician. We give advice which causes problems to the industry, and it is important that these differences are visible to decision makers, like regulators, like Government itself. That is not easy to do if it is all one big organisation. It needs separation in our view. And you need a focus for thinking, and there are different skills required in dealing with the very long term. The technical and scientific expertise needs to be maintained and the social aspects are absolutely

key.

	Funding %	Share %
BNFL/Magnox	69.3	74.5
UKAEA	14.8	14.7
British Energy	7.7	10.8
MOD	8.2	0.0
Government (DTI) - 1 Special share		

What is the company structure at the moment? Nirex is owned by the industry. The funding column is slightly different from the shareholding column because colleagues at the Ministry of Defence fund 8%, but they refuse to become shareholders in spite of my best efforts. They decided to stay as funders. BNFL might not dominate our funding and our ownership, they are 75% owners. The Government has a special share and it really is a very obscure thing. We are not allowed to dispose of repository sites hundreds of years ahead without their permission, that is what the share is about. In actual fact, it gives the Government a voice in our board. The Government has put two people onto our board and it is an important development in the last year. One is Professor Blurs, a long-term opponent of Nirex, he is in Open University, Social Science, and the other is Sir Ken Jackson, who is the head of one of our major unions in the U.K. Sir Ken Jackson is a man who stands up and defends the euro, so he has got close links with the Government, and it is quite significant that he has been put on our board.

In summary, Nirex is in transition, it will be replaced by another organisation. Our role at this point is to learn lessons from the past and try and put these in place as best as we can so that going forward, hopefully we can work together with the followers. As Rachel Western said, we try and work together with people we would formerly call opponents so that we can each understand what we are doing, because the issue isn't between us, the issue is to try and find a solution for the very long time.

Discussion

MS. SHELLY MOBBS

Thank you. I would like to say that I view this session as a chance to comment, discuss, remark upon the decision making process. We have heard a lot about the importance of openness and clarity and credibility, and the chance to give everybody the opportunity to express their views. So I would like to give you now the opportunity to express your views on the decision making process. Who would like to start?

MR. FRANCOIS DOSE

Good morning, François Dosé, Member of French Parliament, Mayor of a small town next to Bure site in Meuse Departement in east France. My first question is for John Hetherington. You hope more contributions from local communities in the decision making process, but there is a certain difference between local community and local authority. What difference would you make between the expression of the community (the inhabitants) and the expression of the elected people ?

Furthermore, I would like to know if Friends of the Earth accept the idea of an underground laboratory, or if there is a refusal on a principle. Did you lead this battle because you have an opposition in principle to this underground research programme ? And finally, a question to Mr Murray : does Nirex associate other laboratories in the studies it carries out, and are these other experts free to publish as they feel like? Thank you.

MS. SHELLY MOBBS

May I ask John to answer the first question. I would like to exercise my chairmanship here and ask you really please to talk about the decision making process, how you come to a decision, and not to ask questions related to what is the correct answer, what should we be doing with our waste. This is not the topic for this seminar.

MR. JOHN HETHERINGTON

The community in the locality around Sellafield is part of a district council in the U.K. called Copeland Borough Council. There are two representatives from Copeland Borough Council, elected members here in this conference, and I am sure they will share that local perspective with you if you make acquaintance with them. The county council covers a bigger area than the immediate sort of 10, 20 miles around Sellafield. It extends something like 120 kilometres around Sellafield. As part of our involvement with the process of development of the proposals of characterisation facility, on the way to proposals for a deep repository near Sellafield we took a range of techniques to get community opinion.

We both did public opinion surveys of the standard type, and consistently we were getting results that showed there was much more support for the proposals in the immediate locality than in the rest of Cumbria. And the further field you went the more it mirrored the national U.K. position on nuclear power and nuclear issues. We also had a piece of research carried out using focus group techniques which helped to provide a real understanding of what much more detailed sets of opinion about the issues were. Those sets of techniques were used by the elected local government, county and district level, to determine whether our concerns were in line with the local concerns in the community.

MS. RACHEL WESTERN

I think it actually worked out very well. I mentioned in my talk the way that I liaised with one of the local councils, providing them with information. There was a very active process of democracy in action, there was a provision of information to the councillor, and I think he was able to provide that to the others. Cumbria County Council organised a meeting in 1994 where they invited the people to speak, and that was when they were making the decision about what position they would take on the RCF. I think it

was quite a big decision for Cumbria County Council to take the position that they did because it meant spending a lot of money which they could otherwise spend on other projects, but they did play a very influential role.

MR. CHRIS MURRAY

From my point of view, the issue between the local council and the wider council was particularly relevant to planning issues, and after taking a lot of advice, we put the submission to the wider council, to the county council as opposed to the local council. I think that is an issue that is to be debated out of thought, just who is responsible. Copeland Borough council are, for instance, responsible for giving the planning permissions for the BNFL facilities at Sellafield, but they were not responsible for dealing with the Nirex proposals for a repository. So there is a line there that I do not know how helpful it is.

MR. THOMAS BUSSUTIL

Good morning, I am Thomas Bussutil. I am the director of communication for ANDRA, the French national waste management agency. I just wanted to ask a question on the decision making process about economic compensations. You did not detail that. In France, we have been accused to use compensation to buy people's conscience. If I understood well, you said it was normal to have compensations. Can you detail that? What is your point of view, and I would also like to have the point of view of Rachel Western on this issue. Must there be compensation or not, in which structure and at what time?

MR. JOHN HETHERINGTON

An immediate answer to your question is that there is no tradition in Britain of providing compensation packages to local communities for major developments that affect them. There is something called planning gain where, for example, a major supermarket developer might pay for a link road. And so things like that can legitimately be done, but there is no legal or formal mechanism to allow for compensation. There have been past examples where some support mechanisms to a community have been put in place, and a quite early example was for the THORP proposal at Sellafield where a package of support was voluntarily agreed by BNFL with the local community involving sports development and housing renovation and so on. But that was very unusual and was not part of the formal planning system. To give you a short answer, there is no legal mechanism to formally through Government support a local community.

MS. RACHEL WESTERN

I think the principle of providing planning gain and compensation for a repository is a very dangerous one because the impact of a repository would likely be on people in the future, on the health impact, and those people would not benefit from the new road or the sports complex, or whatever it was. So, at Friends of the Earth, we are against it.

MR. CHRIS MURRAY

For us, it is a major issue because there is a lot of debate behind closed doors about this. It is usually characterised between, at the most extreme, why should the people in one community take the bargain for the rest of the U.K., which they do in some sense, and not be substantially recompensed. I would disagree slightly with what Rachel Western said there because the kind of recompense that is envisaged could be regeneration of that area, which is definitely for the future. It is not just a temporary thing. Now it is a big issue because is that a bribe? Are then people setting aside all the proper processes of safety and concerns about the fellow citizens around them? I am afraid the only answer I can give is that we are trying to get this put on the agenda, and that in itself it would be a great feat because the Government does not want this to be discussed - just think of the precedent that could be said! Now we argue of course that this is a fairly unique set of circumstances. You know the longevity of the issue on the problem, but I think as far as we would say, if we can get this onto a public debate before anything happens, that would be the ideal.

MR. EMIL KOWALSKI

My name is Emil Kowalski from Switzerland, and I would like to make a small comment on this compensation issue. In Switzerland, if you are constructing a hydropower station, you have to get a water license from the community who possesses this water right. So if you are producing several kilowatt hours of hydro current, you have to pay the community. And we have realised that it is exactly the same point of putting some communal resources on the service of the whole society of the whole nation. If you are putting your surface water or your underground at the service of the nation to store the waste, it is a very similar point. So we have realised that there are some similarities. It is not so totally unique, as you mentioned.

MR. TORSTEN CARLSSON

My name is Torsten Carlsson, Oskarshamn. My question to our English friends is: are there any clear rules in England for owners of land - no matter if they are farmers or agricultural land owners or if it is a land of their own - are there any rules in place for compensation of these land owners in England if they wish to have waste placed in their land ?

MR. JOHN HETHERINGTON

Yes, there are provisions to require compensation in cases where there is compulsory purchase of land for public purpose. But in the vast majority of cases, there is an effect of voluntary agreement between a land owner and the developer that does not enter in such a provision for compensation. There is simply an agreed value. And in some cases what we call the "district value" would have a role in defining the level of compensation. But Nirex may want to comment on some of the experiences that arose around the area at the time you were investigating.

MR. CHRIS MURRAY

The comment I would make about compensatory process has not really to do with Nirex , but according to the experience I have and the knowledge of it, it would not recompense in a kind of major way. It is just the market value of the land, but it does not address the bigger issue we are talking about.

MR. TORSTEN CARLSSON

Can you say that in England there is no model for how to compensate the owners of land within this context?

MR. CHRIS MURRAY

There is no model in the context we are speaking about, in the sense that there is no recognition that an area or a community is taking something on behalf of the whole country. That is not recognised. The English have been very pragmatic people and the Government would not want to recognise it readily. I guess the only thing might be that this was in some way sub-national (?), that it affected everybody. They may make an exception. But I just do not know. I do know it is a big issue and it really should be debated and not left as it was before. Nirex did some planning gainbut in the context, it was ridiculous. We gave Copeland money for schools, playgrounds and so on. So it was minor things, it just did not get to the contract between society and the community.

MS. JENNY LUNDSTROM

My name is Jenny Lundström, and I am representing SOS-Tierp, a local NGO in Tierp, Sweden. I have a question that I would like everyone in the panel to answer. In Sweden, we do not have a broad, national debate on the nuclear waste issue. This is a very bad situation, because we need this to be able do adopt the criteria for siting and choice of method. The discussion have to involve more than the three communities which are involved in the siting process now. I would therefore like to ask whether you have

had initial debates on how to handle the nuclear waste in Great Britain. Further on, I would like you to explain the reasons for either having a debate or not having a debate.

MR. JOHN HETHERINGTON

As I mentioned, the debate is just about to start in earnest in Britain. The consultation paper in the future approach to radioactive waste management has just been published by the Government, and it essentially is a consultation paper about process : what process should we follow in the U.K. in opening all these questions to debate. The specific question of compensation is not dealt with in depth in my quick reading of the consultation paper, but I recall that Chris Murray from Nirex has said that it is an issue that should be dealt with up-front before we get too far into detail siting questions a year or two down the road.

MS. JENNY LUNDSTROM

My question did not link to the question of compensation. My question was about the nuclear waste issue. We have to have a debate to discuss the criteria that the method and site shall meet before we start discussing technical details, because this debate is the first thing. We do not have it in Sweden. My question was: do you have it in England, and if you have it, why do you have it; if you do not have it, why do you not have it?

MR. CHRIS MURRAY

I must say that if we look at Sweden from our perspective, we believe that you have had debates in the past and that you are in advance something like 15 years ahead of where we are now. In the UK at the moment we are at zero. The debate has to be held in the U.K., it has been held before, but the options now are: is it above ground? Is it below ground? Do we send it to space? All these debates have been held in the past, but it is necessary at this point in the U.K. to hold that debate again. I could not really comment on the Swedish position, but my perception is that you are further than we are.

MS. SHELLY MOBBS

Rachel, do you think we are now engaged in a national debate in the U.K.?

MS. RACHEL WESTERN

We had a big national debate in the late 80s when Nirex were proposing going to shallow sites around the country, not at nuclear sites, and it was quite hilarious. The level of the debate reached feverish because the sites had been chosen in concerned political constituencies, and just before the election, there was a U-turn and sites were abandoned. I think it was about that stage, maybe a bit earlier on, that Nirex even had a national news reader on their board because they wanted to have a national debate and involvement. In the 90s, we had good involvement because we had very effective journalists that monitored the situation and they were able to engage you in the debate. It was more the specialist press. And although we have got this process which has just started now, I think it might be quite hard for people to follow. I think until there are actually specific sites, it would be difficult to have a national debate for people. It is not clear how that is going to evolve. Nirex went for the sites and the nuclear installations and have not been successful in those places, so wherever we go next is extremely unclear.

MRS MONIQUE SENE

In everything that is being said, we talk about transparency, dialogue, perspectives. What I am not hearing about, and it makes me wonder, is how we transform the rules of dialogue towards a genuine consultation involving the population and the elected representatives so that we can make back and forth consultations on a decision. I am not sure that the citizen is actually participating in the processes described. It is the same thing for compensation and money : the dialogue must be deeper, or then some people would think that local actors are having unfair advantage or are being bribed. I think all the cards

should be put on the table right at the beginning, and everything should be actually discussed. The first thing to discuss is the problem of the waste. How does the country manage it? Therefore, we are automatically driven towards the politics of energy in the country. How is the citizen going to be able to say "I agree" or "I do not agree", and how can he or she say no? Will this be taken into consideration, and how? Thank you.

MS. SHELLY MOBBS

Thank you. I think this is coming right to the very heart of the COWAM project. It is obviously important to have a dialogue. The question is how do we have an effective dialogue, and this is why we are here. We are trying to work out how to make the dialogue work, how to make it open, how to gain trust? I think this is a very good point.

MR. NEALE KELLY

Neale Kelly from the European Commission. Can I just ask the speakers of this morning to expand on the role of Public Inquiries in decision making processes? Public Inquiries are fundamental in the UK system. I was involved in several sides of this process in the past. My own view is they can be a very effective means in challenging or stretching both the proponent and the regulators. The clarity of thinking in these organisations is often considerably enhanced through such processes. I think this process is therefore very good but I would like to hear your views. One thing I heard this morning, from at least two speakers, that disturbs me was the impression that there were losers and winners in Public Inquiries. There are not losers nor winners. Rather, the outcome is part of the democratic process and it should be welcomed by all. Language which says "we won" or "we lost" is for me counter-productive. But I would like to hear your views because Public Inquiries are far from perfect. What could be enhanced or changed? What could be done to have the outcome accepted by all?

MS. RACHEL WESTERN

I think I am the culprit in saying that we won or we lost. As I said in my talk, I actually did a PhD looking at public enquiries processes. I was involved in the Hinkley inquiry. There might an inquiry coming up in Transfynydd about a decision on decommissioning. Public inquiries are extremely resource intensive, and I think there is a big issue today. I think it is all very nice to say that they are contribution to the democratic process, but they demand enormously voluntary efforts from NGOs, and particularly local campaigners. And it can be quite arduous that you get the involvement that improves the character of your thought. It can be very easy for people to just not have their eye on the ball and not make the preparation for an inquiry. I think what we should really look at is some sort of resourcing for people that do not have the resources of the proponent. The resourcing balance that I referred to is quite enormous. I do not agree with you to say that an inquiry is just part of a democratic process and that one should not talk about winners and losers. It is a combative approach. There is a case which is put forward by the proponent and is attacked by the opponents, and that is the way you get the incisive nature of the sort of the Spanish inquisition of the whole thing. That etching way of some sort of truth is I think quite valuable. I am in relationship with Nirex now in what I am doing. I think in the long term, it is good to do that at some stages. But I think ultimately you do need hold points where you stop being qualitatively just smooth and say : What are the boundaries here? What should we actually be doing? And you have a whole point where you say yes or no, should we do this, or should we do that. And not yes, maybe, let's do it, whatever we think about is a valuable process. Thank you.

MR. CHRIS MURRAY

It certainly felt like the Spanish inquisition! But I agree with you Rachel. At a certain point I do believe it had clarity, it is a very necessary thing. That inquiry actually stopped the whole process in the UK and, I would argue, for the better. But I think there is something else that inquiry does not get to : a general discussion within a society about whether this is a thing we should all be doing. And that was completely lacking. In fact, Nirex exacerbated that in the UK by deliberately focusing on a narrow point. We actually did focus on the community. As we look at it now, on the advice we get from QCs, it is simply not sustainable. Things like the environmental impact assessment and directives from the EU would force you

to have a wider debate. The public inquiry is absolutely excellent with the sharpness coming in, but it must not be the only thing.

MR. JOHN HETHERINGTON

Well, I agree with what the other speakers have both acknowledged. There are key benefits in many ways of the British planning enquiry system because it is adversarial in nature, or evolves into being adversarial. You have an applicant and someone who refuses an application. They are on opposite sides. You have a very forensic, very sharp look at all the issues. There are significant advantages from that. Without any shadow of doubt, the inquiry that was held in the Rock Characterization Facility enabled the concerns that emerged from the community, such as the County Council, the District Council, and local community groups who worked quite actively, to actually press key questions and key points. So there are advantages to it, but I agree with the sentiments that other have expressed that there are also significant disadvantages. That is partly because it comes at the wrong time in the sequence of events : you are always looking back to decisions that were taken historically and have not been examined for these very long time scale processes like the development of a national policy. What the method should be for handling waste in the UK ? what the method to move on from any decision you reach on that onto where you might locate the facility ? All those things need multiple methods of owning those steps, because if you then have an enquiry 5, 10, 15 years down the road, you will never recover. If we are into that process again in the UK, you will just repeat the circumstance with another local group on the opposite side of the process. So my perspective is that there needs to be this mix of things that arose in the White Paper connected with different ways of dialoguing and so on. These open up the issues step by step. Many stages are along the way, and you could never close down those formal enquiries, they will happen. But the context of that previous history of assessment involving stakeholders does at least provide some framework on which those enquiry processes can have an history that is not new but is widely available and in the public domain. That may well be a key to open up the processes. It was very valuable and necessary in the UK as a key adversarial, inquisitorial process to open it up. But I would not necessary say that for something as long as the process we are talking about, holding everything off to 10, 15 years in the future will get to anywhere at all.

MS. LORRAINE MANN

Lorraine Mann from Scotland Against Nuclear Dumping. There have been various consultations going on in the U.K. about various aspects of the nuclear industry. Personally I could fill 365 days a year touring around consultations. But I am a volunteer, I do not get paid for doing any of these tasks. When I go to the consultation, I lose a day's work and I lose a day's income. If you take professional groups like Friends of the Earth and Green Peace, people are donating money to them to fulfil the key functions of campaigning to protect the environment, not touring around doing the nuclear industry's work for them. The same applies to local authorities. In our area, local authorities are having difficulty finding the cash to put salt on the roads in the winter and educate our children properly. It is not the function of local authorities to divert money from those things into doing work for BNFL or for Nirex, or whoever else within the nuclear industry. So my question is this. There is clearly a commitment to consultation, and the nuclear industry needs to have a commitment to consultation. Is the nuclear industry going to be prepared to make the funding available? Never mind the planning gain when the things are eventually decided. Is the nuclear industry going to make the funding available to enable real participation by local communities or not?

MR. CHRIS MURRAY

The answer is I do not know, to be honest with you. What I would say is that is one of these issues that need to be fed into this consultation process that has just started because it is a big issue. And you are quite right, there about four separate consultations that are happening on nuclear matters in the UK at the moment. I think it is a genuine problem, but it goes deeper than that. It actually does touch the question of planning gain, the question of ethics. It comes back to that root again: how does a citizen engaged with this kind of proposal ? Should one be paid for taking time of work? I think it is a good question; I do not have the answer. But we are in the position that given our chance we could try and address these things in the UK.

MR. ALBERT COLLIGNON

Albert Collignon, Commission d'Information de la Hague, France. This is a question to Chris Murray on the publication of the list of candidates' sites. Why was it unfair for these sites to have the list of sites published once they were candidates ? In France, we have had publications of lists of sites in the newspapers when these sites were not even candidates. It seems to me that this French situation raised more important problems for local democracy."

MR. CHRIS MURRAY

There was so much secrecy in the last site selection process that it was decided as a policy matter by Government or by the owners that the names of the sites would not be released. In this day and age, that just does not seem sensible. I have talked to colleagues in France and in Finland and other places where a different approach has been taken. What we say about the future is that in the U.K. the site process should be completely open. When you determine areas on the map, this should be open. If you get to a process where there are 500 possible areas, that should be open. And when you work away down the process, it should be open. The difficulty we have in the U.K. is that it was not open. It was felt that it might prejudice these 6 or 10 communities if for what was a flood process they are named on blighted (?) on the basis that they may not appear in the next list. That is where the whole issue is. The way we feel it might be sorted is not to name just the last 6 but to name of the last 50 with a proper discussion about what is going to happen in the future. The issue is sitting with the Department of Trade and Industry at the moment. But they will undoubtedly come back to us and ask for our opinion. If we put this site out, we will have to put it out in a context. There is no site selection process at the moment and it will change in the future. In the interest of openness we should name not only these sites, but other sites as well. This is how we think about it at the moment. But this is not resolved.

The Swedish Context

MR. HARALD AHAGEN, CHAIRMAN

I would like to start this afternoon session. My name is Harald Ahagen. I have been involved in various aspects of nuclear waste since the late 70s and since 1992 I am an advisor to the municipality of Oskarshamn. I am also a member of the steering committee of the COWAM project.

This afternoon we will deal with the case study of Oskarshamn, a story that dates back to the early 90s. We have five speakers. So I will directly move over to introduce Dr. Olof Söderberg. Dr. Söderberg is currently a special advisor to the Government on nuclear waste issues and he has a Ph.D. in political science from the University of Lund. He is also a member of the COWAM steering committee. Dr. Söderberg will give a brief introduction to set the scene to the Swedish framework.

Background context on nuclear waste policy in Sweden

BY MR. OLOF SODERBERG, SPECIAL ADVISOR TO THE GOVERNMENT ON NUCLEAR WASTE ISSUES

As a background for this brief introduction, I would like to stress one underlying value statement - a principle - that Swedish legislation is based on. This is the conviction that the present generations, who benefits from the use of nuclear power, have a clear moral obligation to make all the necessary efforts to ensure a safe short-term and long-term management of the waste arising from the production. It would simply not be ethically defensible just to leave the problem to future generations to solve - and to carry the costs without having the benefits.

Nuclear waste management in Sweden takes place within the framework of a legal system based on one fundamental principle:

"The owners of the reactors are fully responsible for the safe handling and final disposal of the nuclear waste"

This full responsibility includes

- finding a satisfactory technical solution,
- implementing that solution and
- carrying the costs.

This is a clear application of what is generally known as *the polluter pays' principle*.

The main actors are shown on OH 1.

The reactor owners fulfil their responsibilities through the Swedish Nuclear Fuel and Waste Management Co. (hereafter referred to as SKB), which they own to 100 %. It is the task of SKB to find the necessary and suitable technical solutions and to convince the Government and the regulatory authorities that these solutions should be accepted.

SKB is expected to apply for the necessary permits for the siting of a certain type of disposal facility at a certain place in one of the about 285 municipalities in Sweden, and the Government and the regulatory authorities will eventually decide if such permits will be granted.

During this 'siting process' municipalities, which in one way or another are concerned by SKB's selection activities, are playing one of the most important roles. In fact, *one* prerequisite for the Government's siting permit is the consent of the concerned municipality¹. It should be remembered that there is a

¹ This municipal veto right (which also exists for other major industrial undertakings) is generally regarded as

strong tradition of local self-government in Sweden based on the municipalities. The local population elects its own decision-making body (which is empowered with the right to impose municipal taxation), the municipal council. It should also be remembered that municipalities vary very much in size and population.

FINAL DISPOSAL OF SPENT NUCLEAR FUEL

Main actors - nuclear waste



The present siting process has evolved during a period of some years, SKB being influenced by Government statements and discussions with the regulatory authorities and with concerned municipalities. The process may be described as a step-by-step approach with identifiable phases:

- *General siting studies* (covering the whole of Sweden or different regions of the country);
- *Feasibility studies* (in five to ten municipalities);
- *Site investigations* (at least two) and;
- *one detailed site characterisation*. Given that the result of the detailed site characterisation is favourable, that site will step by step be developed into an operational repository.

Cf. OH 2. At present SKB is in a phase where 8 feasibility studies have been carried out and 3 sites have been identified by SKB as candidates for site investigations. (Claes Thegerström from SKB will present the company's current activities more in detail.)

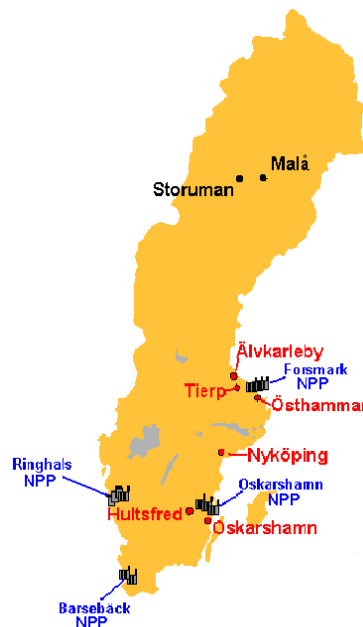
almost absolute. But the law contains an article that gives the Government a remote possibility to override a municipal veto.



Spent nuclear fuel from Swedish reactors is to be taken care of in Sweden.

Several municipalities are involved in the siting process for a repository.

* Feasibility studies in progress
* Completed feasibility studies - NO to continued investigations



SPECIAL ADVISOR FOR NUCLEAR WASTE DISPOSAL,
MINISTRY OF THE ENVIRONMENT, SWEDEN

There are legal provisions to make sure that regulators and the Government have insight into and influence over the general direction of the work of SKB. Thus SKB is obliged to present to the Government, every third year, its programme for research and development (*RD&D-Programme; Research, Development and Demonstration*). These programmes are thoroughly reviewed by the nuclear regulatory authorities. As a part of the review, these authorities ask for advice from other government authorities and from universities. Comments are also invited from municipalities that are directly concerned by the work of SKB and from environmental organisations.

Municipalities where SKB is conducting feasibility studies or site investigations are entitled to a limited economic support from government sources. An amount of at least 2 MSEK per year (about 250 000 euro) and municipality may be used for local competence building and information activities.

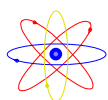
Based on recommendations by the authorities and ministerial advice, the Government decides to state its opinion about the general direction of SKB's work as described in the RD&D-Programme. These recurrent government statements have an important influence on the work of SKB. The statements mainly concern the general direction of this work.

The latest Government statement was made in January 2000. The Government found that SKB had met the requirements of the law. But SKB was requested to present, *inter alia*, an integrated evaluation of completed feasibility studies. In December 2000 SKB produced a report called *Integrated account on method, site selection and programme prior to the site investigation phases*. Based on this report, SKB announced that the company would like to start site investigations in three identified areas, one of which is situated close to the NPP of Oskarshamn and the other two in the part of Sweden where the Forsmark NPP is situated.

Cf. OH 3. According to SKB's plans, site investigations would commence during 2002. Such investigations do not require any formal permits by the Government, by any government authority or by the concerned municipality. However, there has evolved a common understanding between SKB and elected municipal leaders that both feasibility studies and site investigations cannot take place unless the concerned population accepts such activities. In practice this means that the highest decision-making body of the municipality, the elected municipal council, should say YES to SKB's proposals.

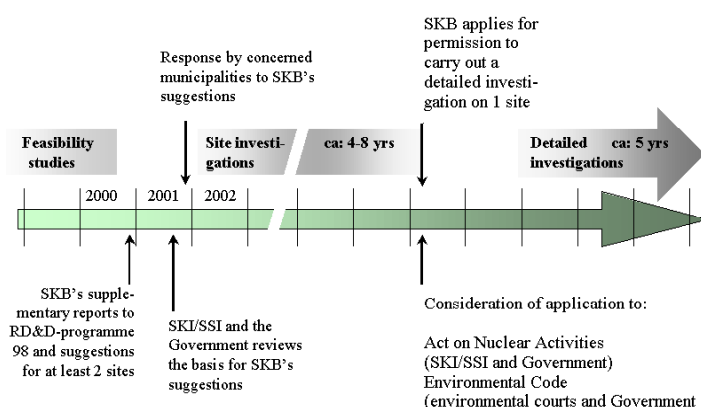
The municipal elected councils have declared that the issue of 'allowing' a site investigation within a certain area of the municipality will not be discussed unless both the regulatory authorities and the Government have reviewed the basis for SKB's proposals and publicly stated that they find SKB's proposals well founded.

In June 2001 the concerned authorities presented the results of their evaluation of SKB's proposals to the Government. The reviewers generally strongly support SKB's proposals. Environmental organisations have



FINAL DISPOSAL OF SPENT NUCLEAR FUEL

Siting - What is happening?



SPECIAL ADVISOR FOR NUCLEAR WASTE DISPOSAL, MINISTRY OF THE ENVIRONMENT, SWEDEN

expressed strong criticism. The evaluation statements are currently under study within the Ministry of the Environment. Both SKB and the concerned municipalities would like the Government to respond within the end of 2001.

There is one underlying and important assumption behind SKB's site selection activities. This is the assumption that the selected site should be suitable for deep geological disposal (in hard rock at around 500 m depth) according to the KBS-3-method. Both the Government and the regulatory authorities have accepted the KBS-3-method as a main alternative when reviewing SKB's research and development programmes. In their evaluation statements in June 2001, the regulatory authorities strongly recommended to Government to make it clear that this method should be regarded as a planning prerequisite for SKB's three proposed siting investigations. The Government's respond is currently under consideration.

It should be noted, however, that even if the Government follows this recommendation, neither the Government and regulators nor SKB have taken a final position on the issue whether final disposal is to be carried out according to the KBS-3-method, or if any other strategy or method should be applied. A final position on that issue will not be taken until SKB has submitted a formal application for detailed characterisation of a particular site (or for permission to build an encapsulation facility). This will presumably not happen until after a few years ahead.

Background context on SKB nuclear waste management activities

BY MR. CLAES THEGERSTROM, VICE PRESIDENT OF SKB

Good afternoon. I will briefly speak about the Swedish concept and technical method for final disposal of the waste, including existing systems. Then I will try to highlight quickly some of our experiences in siting efforts since the very beginning. But before that, just let me remind you about the Swedish nuclear programme. I think one might say that it all started in a way in this municipality about 30 years ago when the first big commercial reactor was taken into operation in 1972. Since then, we have developed a nuclear programme. We have at present 11 reactors. We have been through a national referendum on phasing out nuclear. One reactor has been closed down. Whatever happens is a good guess that at least for quite some years more, there will still be nuclear reactors in operation in Sweden.

So we have waste and we will have some more waste. At present we get about 50% of our electricity from nuclear energy. Already in the 1970s, there came clear indications and legislation about division of responsibility. That triggered in a way the nuclear power production industry to set up in an early stage a centralised system for handling the waste coming out of the reactors. Since 1988 we have a final repository for the short-lived low level waste from nuclear reactors at the Forsmark plant, and we have in Oskarshamn the central interim storage for spent nuclear fuel (CLAB). With this system, we have a great flexibility in adapting to what might come in the future. We are now implementing the last phase of this programme : the long-term safe solution. We have been planning for many years deep geological disposal in the Swedish crystalline bed rock as the main option.

The Swedish technical concept

I guess most of you are familiar with what we call the KBS-3 concept. The basic characteristics of that concept have been there since the end of 1970s. It has been developed over the years, and we have now reached the stage where we are testing inactively in full scale canister fabrication, details like seal welding of the copper canister, and the behaviour of canisters and bentonite in real crystalline rock at the depth that we planned for. For that purpose, we have developed and constructed a hard rock laboratory. It is a kind of a dress rehearsal facility for final disposal of spent nuclear fuel. Full scale inactive experiments are now running on safety related issues and technical issues (how to make the disposal in practice).

So far for the technical system. Then as we all know, the most critical and difficult task is not only to develop the concept that has to meet the various stringent safety requirements, but also to find a suitable site where such a repository could be accepted in a good way. There we have also a long history of developments. In a way, one might say that it started already in the end of the 1970s where a study site programme was started for deep drilling in many places all over Sweden. We got about 50 kilometres of drill cores from that programme. It was about 10 sites. To characterise the result of that, briefly one could say it was a scientific, important step. We learned a lot about crystalline rock in different parts of Sweden. From a political and social point of view, the experiences are more mixed. There were oppositions in many of these sites. It was not possible to build on these sites for the further selection of sites, but they have provided very important scientific basis and understanding of crystalline rock.

Then we had in the meantime a standstill in siting experiences since the mid 80s. Of course we have sited the installations that we have, and that has also given us some experience in siting activities. But what we are now seeing in the Swedish programme really started in the beginning of the 1990s based on the previous experiences. One major experience was that we cannot only deal with geology. Geology and long-term safety is of prime importance and has been so for all the time of the programme. But what happened in the 1990s was that we also included the social aspects, the discussion with the population and the local communities. We started a process with feasibility studies, first in the north.

The basis for this process were overview studies of the whole country. With the help of the Swedish geological survey we have drawn the conclusion that there are suitable areas in most parts of the country, that we need site specific studies to qualify any site and that societal factors have to be considered in parallel with the geological factors. Based on these experiences, we started a process based mainly on two very general principles : looking for potentially suitable rock and for potential interest with local communities in siting, and starting the discussion very early long before any new

drillings in order to highlight the issues and to look for the possibilities, the difficulties and all the questions around this important issue.

Now we can look back at about 10 years of experience with feasibility studies. Feasibility studies started in the north. SKB was quite alone together with a few small communities up in the north of Sweden. We soon felt a lack of national and regional support. We had a feeling that safety regulators were not yet in phase and ready for full participation in the process. The situation developed into strong local support from some parts of the local community and strong local mistrust from other parts of the municipality. We made the feasibility studies. Following these studies the municipalities organised a referendum asking the population to say *yes* or *no* to a continuation in siting studies.

The outcome was a very strong *no* in the municipality of Storuman in 1995, and a more even situation in 1997 for the Mala municipality, but still 53% said *no*. According to our principle, that we only worked where there was a clear interest, we left these municipalities and we did not continue with any studies relating to siting in those municipalities.

While working in the north, we started also working in the south with 6 municipalities at the end. As a result of these experiences, the siting process developed and became more defined. The Government took some important measures like, for instance, deciding that local municipalities should get funding for their participation. I think that is a key decision. We can be happy to see positive development of the siting process in Sweden, more stable and mature, with a real local involvement in dialogue, a lot of engagement from the local municipalities and clear national and regional support. This question is not only limited to the municipalities involved in this.

If one takes a broader look on siting, one could highlight some general trends about these decades of experiences that we have had from SKB. It has certainly become more complex. If we compare the siting of CLAB to the siting we are trying to do now with the deep repository, it is of course a more complex process. It will take more resources, it is more demanding on all actors, and it is more time-consuming. I think that is a mere fact that we have to face.

There might be higher risks of delays, or even failure, if there are important mistakes or other things that happen in the process, but I think there is certainly a greater possibility of a broad support if everything is managed in a good way.

Where are we today? We have worked according to this siting process. It is now well confirmed in different ways by authorities and the Government. We have spent 10 years on the feasibility studies, and you will hear more about that in the case presentation soon. We made a selection of 3 sites: Östhammar, Älvkarleby/Tierp and Oskarshamn. We presented that selection to the Government, together with the new and updated review of different alternatives concerning the concept. The authorities and other bodies have basically confirmed our report and believes that our programme should continue as planned.

The question is now on the table of the Government. Provided they will give a green light and the municipalities would like to continue, we might, by the next year, be in the siting investigation phase of the nuclear repository siting in Sweden.

A final word. We sometimes look to our neighbour in the east, in Finland, and we are happy to see that they have based their programme on the same technical concept and they only some months ago got a decision in this phase after site investigations. The decision on the choice of the site was confirmed by the Finnish Parliament. This is the reason why we have a lot of cooperation with Finland both on technical matters and in broader terms. Thank you very much.

Second Case Study - Oskarshamn

Feasibility Study in Oskarshamn

BY MR. BENGT LEIJON, SKB, SITING COORDINATION IN OSKARSHAMN

My presentation will focus entirely on the feasibility study conducted here in Oskarshamn.

I will try to outline a little bit the content of this study and some of the experiences that we gained here. The work sequence takes place between 1995 and 2000. In 1995, the overview studies clarified that the feasibility studies were of interest to us in some of the municipalities already having nuclear facilities. One of them was Oskarshamn. We approached the municipality with that question. After considering that for quite a while, about a year, the municipality agreed that we go ahead and do the feasibility study.

Feasibility study, part 1 : Geology, land use, environmental and social impacts

Our feasibility study in Oskarshamn, just as the other seven of them, comprised two parts. One was a fact-finding part : we tried to put together basically all material that we could find that had anything to do with siting prospects in this municipality. We collected information about geology because that relates directly to potential to achieve a safe storage. We looked at the technical aspects : the transportation, the technical feasibility of constructing and operating a repository. We looked at land use aspects : we detected land where there was possibly land available for us. And we looked at the environmental impact. We also looked at the societal aspects : what were the premises, how would a repository establishment here affect the society in the future, what was the forecast with and without a repository in place ? This part was done by independent experts who worked on geology, land use and societal aspects and reported to SKB.

Feasibility study, part 2 : Local dialogue

The other part was an active dialogue with the municipality, with the local interest organisations and the public which we initiated from the start. We also had formal consultations with the actors of the programme on both the regional and national levels.

To combine these two parts, it was necessary to implement the work sequence in steps and to report basically at each step. I will come back to that later.

There were limitations though to this scope. It is important to mention what the feasibility study did not contain. We did not do any drilling or more comprehensive concrete field investigations. These were desk studies in a broad perspective. There was minor complementary field studies, but no drilling. We did not look at alternatives for geological disposal. Those questions were of course raised and discussed in the dialogue with the public but they were not part of fact-finding part of the feasibility study.

As regards consultations, the provisions of the environmental code states that siting processes for industrial facilities should be accompanied by consultation procedures in formal matters. That was not part of the feasibility study, that is something everyone feels should start when we move over to the site investigations.

Now I think it is important to look at where were we at start in 1995 when everything started. We did certainly not start from scratch here. If you look at the programme which Claes Thegerström and Olof Söderberg have talked about, the step-wise siting process was essentially there when we started the feasibility study. It has certainly developed since then, but the basic structures, the roles of the actors were already there. We did have indeed the experience from the feasibility studies up north in Storuman and Mala where we did start from scratch.

Oskarshamn experience of nuclear facilities

As you probably already know, neither nuclear power generation industry nor SKB were new in Oskarshamn at the time. There was already a nuclear power plant about 20 kilometres north on the

Simpevarp peninsula. As far as SKB's presence is concerned, an intermediate storage for the spent fuel, the CLAB facility, is operating near the nuclear power plant since 1985. The Äspö Hard Rock Laboratory just north of this peninsula, was sited in 88 and is in operation since 1995. And more or less in parallel with the feasibility study SKB established the Canister Laboratory in Oskarshamn harbour.

So there is a heavy and long-term SKB presence here right from the start and that has a lot of consequences. First of all, everything, which concerns SKB and, more generally, the nuclear industry, employment as well as nuisance, is seen here as a family affair. There was also a realisation from the municipality point of view that Oskarshamn is involved in the spent fuel programme with or without the feasibility study, whether or not the repository will end up here, simply because the waste is currently in the intermediate storage CLAB. There was also an organised active interaction between the municipality and SKB.

From the technical viewpoint, it is obvious that there are some special opportunities in terms of waste and system logistics when the community appears to be the only municipality in Sweden where the waste is actually being collected now.

Results from the technical studies (part 1)

As regards the technical parts, the rocks here are Precambrian basement rocks. There are lots and lots of granites in this community as in major parts of this part of Sweden. We had considerable experience also from our facilities, Äspö and CLAB.

I will show you two examples of results from the feasibility study so that you can see the kind of data that we put together. This map shows the municipality and the areas where they felt the bed rock could be suitable for a deep repository on the basis of desk studies (see map n°1). Here is another example on a different topic (see map n°2). This is a compilation of the data on various kinds of land protection and identified areas of valuable land. What we may note here is that, concerning the entire east coast all the way up to the point north of Stockholm, establishing large new industrial facilities is allowed by law, except for places where there already are such facilities. In the Simpevarp Peninsula the nuclear power plant is one of them, the harbour area in Oskarshamn is another one.

Results from the local dialogue (part 2)

As regards dialogue and interaction with other actors, I have listed below some key components. One was the understanding that we got to be present here: not only going out to meetings like this one, but being available to everyone when one wants to see us. So on top of the work places, CLAB, Äspö that we have here, we established a local information office first down in the harbour, later moved to the city centre. From the start we already gave active communication. To reach dialogue, people have got to talk. We can not expect people to be too interested to talk with us. We have got to approach them instead. So we went wherever we could - to organisations, to villages, to people in general - and asked: "Well, here is our problem, here is our mission. We can explore them. Do you want to hear more about it?" The worst case you get to know is that you do not really lost anything. In many cases you get a yes, and all of a sudden you have a dialogue going on.

I mentioned that we adopted a step-wise working process involving the municipality in the first place and also others. In practice, that meant that the programme for the entire feasibility study was set down here in draft form to get comments and suggestions from the municipality. All the topical reports were presented by the experts to the municipality and the public. The final report was also drafted and was subject to a rather comprehensive review process by the municipality that I am sure we will hear more about. That led to of course to quite a few changes all the way from details to really complementary studies. Once you leave the opportunities for others to affect your project, you have also got to be prepared to do changes in your project, and I think we did.

It is clear that the municipality was and still is a very competent, active and ambitious counterpart in the dialogue. Indeed, it is asking questions all the time, asking for clarification, really pushing us, and sometimes we felt, pushing us a little bit too hard. But as a whole, we feel that the programme, both we as an organisation and the programme in total, has benefitted from that process in clarifying things. We have been strengthened in our view that geological conditions really meet safety requirements. It is clear that in other respects, they are advantageous with regions, municipalities who are not familiar with the nuclear industry. I believe it was a positive experience as a whole.

The future

As Claes Thegerström told you about, Oskarshamn is one of the 3 sites where we hope to be moving on to site investigations very soon. What we are looking at is the Simpevarp Peninsula where the waste currently is, and where we possibly have good enough rock below our feet. We do not know yet, but we are going to check that out. We know that we have granites extending towards the west from the Simpevarp Peninsula. That is the case we want to look further at. On this photo you see the Simpevarp Peninsula coming in from the sea with the nuclear power plants and the CLAB facility. The small buildings here are not real : that is what we feel the surface part of a deep repository could look like in 10 years from now. But the subsurface part may be below there, may be towards the west. The infrastructure is there, the land is there, the facilities are not there yet, but it is implemented to bring them. Now looking west now, we have another environment. We have villages, farming, a small-scale forestry, and lots of land down. So the picture can be quite different if we move west.

I think this situation is a good example of a communication dilemma that we have had since the start of the siting programme. We still have it because these fellows asked some very good and very specific questions. We do not communicate directly with these people, but we do communicate with their owners. They want to know, for example, if they can eat the grass and bring the water here in 10 years. We say yes. They ask how do we know that. We say we have our safety analysis. They say they can not read it. That is okay : decide whether you trust us, decide whether you trust the regulators. That is fair enough. They also ask : "will this green field all be there or will you need it for your facilities? Will there be drilling machines? What will happen with the land owner, are you going to buy him out?" These are very specific questions that are directly related to the future there. The problem is that we can not really answer at this stage because we have to do all those investigations and technical planning first. The early stage siting studies do not really provide the scientific and technical information that is needed to communicate in a good way with local people. As a consequence, we often get very good, very precise questions. We are not always able to give equally good answers. So if this seminar can come up with some bright idea on that, I would appreciate it. Thank you.

Municipal experience and perspectives

BY MR. KRISTER HALLBERG, LKO PROJECT MANAGER, OSKARSHAMN MUNICIPALITY

Thank you. Oskarshamn is a nuclear municipality, I think that it has been made clear. OKG power plant represents about 10% of Swedish energy production. You will visit SKB facilities on Saturday.

I would like to add one small thing about Äspö Laboratory. When Oskarshamn council said yes and approved the application for the laboratory, it was also said that there should never be anything more than a laboratory, that it cannot be the first step towards a repository. I have been active in this municipality during the entire nuclear power era and I dare say that the placement of the nuclear power plant, of CLAB, and the other plants have been pushed through without much of a discussion or debate among the locals or even the local politicians.

Gaining the right of access to the Nuclear Waste Fund

My opinion is that the majority of the people in Oskarshamn has accepted these plants, they do not see them as a threat. When SKB presented in their 1992 research programme a project to locate an encapsulation plant at CLAB, the municipality then responded by demanding the authorities and the Government to provide financial resources in order for the local people to become the competent party that SKB has just so eloquently said we are. We demanded and we received financial resources in the form of 2 million Swedish Kroner annually during a 4-year period. It corresponds approximately to 210,000 € per year. This also meant that the legislation controlling financial funds has changed so that the collateral could receive financial support from the nuclear waste fund. The municipality appointed me as a project manager and we also tied in 3 experts to the project. We have two of them here today, the chairman here, Harald Åhagen and Kjell Anderson, in the audience.

Designing a Forum

Another demand presented by the municipality very early was that we wished to design a forum where the nuclear power authorities, the nuclear power company SKB, the county council and the municipality should be represented. We were of the opinion that the authorities should participate in the entire process. As our independent experts, we are doing it as well. I think that role was then in 1994 a bit controversial for the authorities. I think that they are used to it today. In collaboration with the council of Kalmar county, we started to push forward the work as an EIA process. At the time, the county council had a civil servant with huge knowledge about EIA legislation, and she eventually became secretary of the forum. She helped us very much in the start-up where we had our very intensive and very agitated meetings to start with, where we were trying to learn each other's languages.

In 1995, SKB made an application to do a pre-study in Oskarshamn that you heard about. The municipality took a year to prepare the answer. There were extensive discussions all around the municipality. This feasibility study was approved. Five out of seven political parties in the municipality said yes, two parties said no; they were the Centre party and the Green party. In 1997, we were ready to survey the feasibility study. This started on the M/S Sygin, which is the ship transporting nuclear waste. It was a fairly spectacular start because we wanted to demonstrate clearly both to our inhabitants and our neighbours that a feasibility study had started in Oskarshamn. It took two years to conclude the feasibility study and SKB presented its conclusions in 1999. The preliminary report was processed during the autumn and there was a final presentation of it in the spring last year.

Achievements

Now what have we achieved? We have got economical resources from a neutral source : that is the nuclear waste fund that I am talking about. And this has made it possible for us and for other municipalities involved in feasibility studies to get financial remuneration for informing the inhabitants about the entire process. They have actively influenced the decision making process first of all by stating that the municipality council should dispose of all relevant material before making a decision. We also said that we should be the penultimate level before the Government decision. We had formal support of

that. We also demanded a formal reporting of the reviews and other feasibility studies when they were done in Sweden. There was no such demand in the Swedish legislation, but we managed to push it through.

When requesting this, we received support both from the authorities and SKB. This meant that SKB supplemented their research programme from 1998 with a so-called FUD-K, which is a FUD (Research, Development and Demonstration) supplement or complement. As we all heard, this programme is now being processed by the Government. We are waiting for the results. The focus has been shifted from Stockholm out to the feasibility studies municipalities concern.

Shifting the focus from the national to the local level

At my first visit to Stockholm to meet the authorities concerned, SKB, and people in the Ministry of Environment, I had the impression that the nuclear waste issue was a Stockholm issue. I pointed out then to them that it was actually a fact that all nuclear waste were already located in Oskarshamn, in our backyard. And it was hardly credible to plant a repository in Stockholm. Therefore it was about time to actually shift the focus and transfer the interest to us and other concerned municipalities and to formally appoint us as the main players in this entire process. We have, I dare say, considerably increased our knowledge over these last few years. We have had a lot of extroverted activities where we go and meet many of our citizens. Studies have been carried out and they indicate that knowledge in the nuclear waste issue is fairly extensive in Oskarshamn, as we also know by experience from the many meetings we have attended.

Of course there is dissemination of information from SKB and the fact that we already have several plants to visit in Oskarshamn has contributed to the increased level of awareness. We have designed and created an organisation and methods to deal with this nuclear waste issue. That has also inspired many other projects in the municipality.

How do we work ? – conditions

So how do we work and under what conditions? As you have heard from Olof Söderberg, according to the environmental legislation in Sweden municipalities have a veto right when speaking of nuclear installations projects. The municipality council can approve of or refuse that kind of plant. Of course, there is a safety valve here that makes it possible for the Government to steam-roll a municipality, but the burden of proof on the Government in that case is enormous. All environmental ministers have at least in the press stated that they have no intention of steam-rolling any municipality as regards this issue.

Swedish municipalities have in general a strong position of independence in relation to the central power, and we are protected fiercely in different ways. When it comes to nuclear power, or nuclear waste issue, municipalities have also a very strong thought through position. With a well-planned strategy, you can actually demand considerable things from both central and regional governments. I think the municipalities have everything to gain from partaking actively in the nuclear waste process. Oskarshamn is almost unique when we consider that we have Sweden's spent nuclear fuel. They have all the Swedish nuclear waste here in Oskarshamn already, 2500 tons, I think, that are in the basins in CLAB.

I do not know if this gives us a privileged position. There are plenty of views regarding that. But there is one thing that is very clear to us, and that is as long as we do not have a proper solution for a repository in Sweden, we are responsible of the nuclear waste. We are very, very committed to continuing this process that we can come up with a final repository. Of course that amounts to quality, security. In long term, it is essential, and CLAB gives us the opportunity to delve deeper into that and develop these aspects of it.

The municipal organisation on nuclear waste issues

To say a few words about that organisation as it stands in the municipal structure. The council has 51 politicians elected by the citizens of Oskarshamn and they are also our reference group in the nuclear waste process. The municipal council also designs the structure of the rest of the organisation. The core of the organisation is the work committees, and in these work committees you have local politicians, members of organisations, neighbours, representatives from neighbouring municipalities and also municipal civil servants. You have a project management that serves the organisations. They have

access to experts and they also constitute resources in the work committees. Each group has a very experienced politician as a chairman. The parties that voted no to a feasibility study in Oskarshamn are also part of the work committees, and their critical attitude in the nuclear waste issue contributes considerably to the organisations, stretching the issues and delving deep into the different aspects.

The number of the groups, committees and the number of the people in them has changed. The present organisation has 3 work committees with 15 members each. The municipality board has the responsibility for what they do. In an EIA forum, all the representatives from the different authorities treat the issues that are being presented by the public, process them and present them to the work committees. Our main assignment is to increase competence among the public and the decision makers, and to provide channels for dialogue that would contribute to a better base for decision making. During our several years of work, we have clarified their mission. Several work committees last year started the year by reviewing SKB's choice of methods and sites for the feasibility studies to arrive at the basis for the municipality council decision.

The mission of the work commissions is to discuss, in collaboration with the rest of the citizens here and in the neighbouring municipalities, the nuclear waste issue and to try to set out their attitude towards continued site investigations in Oskarshamn. Each group will collate all the results and present them to the municipality council before the final decision. We have continuously been collating information and facts about NGO's work since 1994. You can see the list here before you and it encompasses several things.

As you can see from the list (see table below), we have partaken in other seminars quite extensively and, above all, we have been very active in organising our own seminars. We have organised our own seminars about everything from materials, transportation, ice ages, earth quakes, whatever, and several times experts from the different environmental organisations have taken to the podium to give their view and shared their experience of these issues. With our own experts and others as well we have organised hundreds of education meetings from radiation matters to legislation. We have informed people of our work, discussing the nuclear waste issue with the citizens in the municipality, people from other countries and other municipalities. It is a long list. It is more than 500 definite activities during the 6-year period. The list also shows that several different ways were tried to discuss the nuclear waste problem.

The main focus of the COWAM project is to discuss if local participation can be reinforced in the decision-making process. Our basis in Oskarshamn is that local participation is self evident, is an obvious thing you have to focus on from a democratic perspective. Local participation will make better decisions and it does not restrict the work of the other parties. Local participation also means increasing demands on all the parties involved.

June 1994 to January 2001

Participation in external seminars	26
Arranged seminars (7 with environmental groups acting)	25
Educational seminars and courses	14
Various political and expert visits (national (MP) and international (NWTRB))	93
Study visits	21
Formal review comments	14
Larger debates and hearings (glaciation seminar)	6
Information to neighbouring municipalities	25
EIA-forum meetings	34
Recorded meetings – locally and nationally	53
LKO expert group meetings	39
Municipality Council meetings concerned with nuclear waste issues	26
Local Safety Council meetings	16
Working group meetings	110

Brochures – exhibitions – www page ...More than 500 activities

Summary

Just a short summary when it comes to the local work and local participation in finding a repository, but also when it comes to other fairly controversial major decisions. I will just mention a few other decisions that are fairly controversial because experiences from the nuclear waste process here in Sweden can also be applied to other major decisions. Decision making from the top, no matter if we are talking the headquarters of a corporation or an authority or a government of course is not accepted today. The sceptical attitude towards central decisions made by a small elite and behind closed doors is an asset, not a threat. We do not have to invent new democratic institutions to meet the future. Our experience from Oskarshamn as a traditional, political structure is more than sufficient, but we need new methods, we need to adapt this structure to the needs of today.

One example is the work committees that we formed under the municipality council that reach out to the citizens to initiate a dialogue. In this enormous project you cannot finance them with the local taxes, you can not have that competing with schools and health care and other things. Active participation requires financial resources from a source that is not related to any participating part. The Swedish Nuclear Waste Fund is in my opinion such a source.

I often come across the attitude that people are not interested. They will not come to the information meeting. They do not have an opinion about it, they despise central as well as local politicians, etc. Our work with nuclear waste issue shows that people have many and very well thought through opinions, they would gladly share them, and these contributions will entail a better base in making decisions, it is without a doubt. We have to reach out to people, we can not just publish an information meeting. We have to reach out. If we encounter resistance and protest against decisions that we find well-founded, then the citizens are not in the wrong, it is the decision makers that are wrong. It may not necessarily be a bad decision, but it could be the result of an insufficient process with a lack of local participation.

Conclusion

I would like to touch upon the positive reinforcement we have received when we worked with this in Oskarshamn. Can we say then that we can brag and say that we are the best, that we are number 1 when it comes to local participation in nuclear waste process? Of course we cannot. We can only hope that we have started down the right road. We know that research, exchange of experiences, projects like COWAM, etc., is required to further develop local participation in the decision making process. We are just standing at the beginning of the long road to develop this work, but I do not want to belittle the excellent efforts that have been made by the people already involved in the process. I think we have a very exciting and very challenging work to develop for the future, as a citizen here and as a decision maker, all of us, because we need to be sufficiently informed to make good decisions on good basis. Let us fill COWAM backpack with good ideas for local influence please. Thank you very much.

Experience and perspectives from an NGO viewpoint

BY MR. OLOV HOLMSTRAND, REPRESENTATIVE OF ENVIRONMENTAL ORGANISATIONS

Thank you. Unfortunately I am going to speak in Swedish because my work is totally voluntary. So unfortunately I had very little time to prepare this.

This issue about nuclear waste in Sweden has almost never been a national issue. This has led to the national environmental organisation not participating in it, and this is the reason that in the different locations where this has been made, current local groups are formed instead. Not to replace or to compete with the bigger organisations, but as a supplement to them. In order for these small groups to be able to have a better possibility of working, they started in 1981 to work in a network, a nuclear waste network. I have since its start been participating in that network as kind of an advisor. I do not belong to any of the local groups. It is as an advisor to this network that I have been asked to represent the local environmental organisation in Oskarshamn. That is my role here. I would like to take the opportunity during these 20 minutes that I have been allotted to give you a counterweight to the very glossy and very positive image you have received of the nuclear waste management in Sweden by the previous speakers.

In order to be able to explain the situation in Sweden, I have to go back in time for quite a few years. In Sweden, just as well as in other countries which have nuclear power and have had it for quite some time, there was no difference between nuclear arms and nuclear power programmes. We had a programme up until the end of the 1960s in Sweden, based on heavy water reactors and self sufficiency, with a definite purpose of producing atomic bombs besides energy. There is also the reason that the nuclear waste issue did not exist in those days because the wastes of course were to be used for bomb production. Therefore, there was no discussion regarding nuclear waste up until the beginning of the 1970s.

Then a general discussion started in Sweden about nuclear power in general. As a result of that, the nuclear waste was also brought up on the agenda. The nuclear waste was then dealt with in a Government investigation, the AKA Inquiry which was published and presented in 1976, on the basis of the knowledge available then and on the basis of the fact that nuclear waste had to be reprocessed. They had concluded that if you put this waste in canisters in the crystalline rock, that would be a good solution. They were of the opinion that if you drilled down a couple of hundred meters, you would find more or less perfect crystalline rock where you could store it. This was sort of a basic assumption that they assumed was the case in Sweden.

At about the same time this inquiry was presented, the nuclear power became a political issue in Sweden. The centre party, which at the time was definitely against nuclear power, managed to push through new legislation in the area, when it comes to nuclear power plants and waste, the so-called Conditional Act or the Conditions Act. We had to follow this law, and the law said that you have to have a completely safe management of the waste. And that was impossible of course. But the law was not there to accurately being met, but rather to stop nuclear power by putting such severe limits on waste management; you couldn't start reactors now.

But we are not living in an ideal world and this did not happen. Instead, the nuclear industry counteracted with a proposition to meet this demand. Following the AKA Inquiry, a fairly vague suggestion about canisters in crystalline rock was proposed to the Government. Without going into detail, I can say that it caused an internal crisis in the Government. They appointed an expert committee with geologists that stated that there is no crystalline rock that can meet those requirements, which was of course correct, after which they stated that the crystalline rock was not all that important anyway, so it could be approved anyway.

The new Government, which was an extreme minority Government, decided that the waste management issue has been solved, and reactors could be charged. So there is a unique decision in Sweden that nuclear waste is completely solved definitely. It is of course an unreasonable decision. The law that I talked about has later been removed and revoked, and the issue is still investigated, which of course proves the unreasonableness of the decision. I mention this only to explain why we feel that the management in Sweden is not credible. This is just one example that I use to highlight that fact. They actually added this issue to the referendum about nuclear power in 1980 in such a way that: If the pro nuclear power parties won and they were to expand nuclear power, then the nuclear waste issue would

be considered as solved. But if the antinuclear power parties won, which is more restrictive, then the nuclear waste issue should be considered not solved. This is possible but even less reasonable. Unfortunately, I can not delve into that deeper now, but apparently this is something that most people in Sweden do not even want to hear. But it is still a fact, it is documented in writing.

After the referendum in 1980, site studies, site investigations were initiated. SKB tried to test the drill in different sites in the beginning of the 80s. These drillings were obviously considered to find a site where you could build a repository. They were controlled by the fact that land needed to be found where drilling was allowed, which was more or less the Government owned forest land. That is where they drilled.

So it was not at all a choice of potential site. They rather drilled where they could put the drills down. These drillings were also implemented covertly. They tried to inform people as less as possible and of course there was a huge opposition to this. This led to the drillings being halted in some areas. There were temporary halts and there were fierce oppositions in many other locations. I think the most famous example is when they tried to drill on Kynnefjäll, on the west coast of Sweden. It resulted in the fact that the local inhabitants kept watching that area constantly 24 hours a day and 7 days a week for 20 years, between 1980 and the year 2000. In year 2000 the present Minister of Environment actually said that Kynnefjäll was not a potential site from now on. The inhabitants stopped their action after 20 years of uninterrupted watching. After that, we have seen another halt to the proceedings after fairly heated arguments in Almunge in 1986, where SKB had to stop their drillings.

Claes Thergerström said it in a different way, but the fact was that they did not have any opportunities to keep drilling, because it was being made impossible to use the police to scatter the protesters. This led to a complete halt. During that halt, at least in my opinion, the Swedish nuclear power inspection authority tried to start with a number of projects, above all, the dialogue project which I think is one of the more positive aspects of the Swedish management of this issue. That is where all authorities collaborated with the major environmental organisations to try to reach a conclusion, to try to come up with a process.

It is fairly interesting to hear those of you who come from other countries. What the dialogue project concluded in its report in 1993 is what is being discussed here. It was just that in Sweden they never did what they had concluded. They continued to work on their conclusions from the other projects. I do not have the time to delve deep into that either, but it is strange they did not take the opportunity to keep working on the result instead. What SKB did is that they took the opportunity to run their own show with the feasibility studies that you have heard being described here. With these feasibility studies, SKB has completely left behind the principles of security, safety and environment. Now all they are looking for is acceptance. They started by asking all municipalities in Sweden: is anyone willing to participate? And actually there were a few up in the north of Sweden with large unemployment and not many people and they could see their people emigrating to the bigger cities. There were negative referendums in Malå and Storuman. Other municipalities weren't interested at all. That actually stopped the interest from SKB's sides. You could say that SKB has an enormous advantage when it comes to propaganda resources. In the locations where SKB did not have time to initiate propaganda, the referendum was negative.

The dialogue project, on the other hand, resulted in a national coordinator being appointed. I think that was in 1996. He is sitting here. But unfortunately this was a huge disappointment at least in the eyes of environmental organisations who had participated up to then. An advisory council was going to be created which we saw as a continuation of the dialogue project, but after the first meeting, the environmental organisations were tossed out from this collaboration forum.

The reason behind that has links with Oskarshamn. They said that the reason they did that was that the nuclear waste network was said to have ordered the local environmental groups in Oskarshamn not to participate in the feasibility study. It was a blatant lie, and it still actually hurts us to participate in this. This is one of the final nails in the Swedish nuclear waste management coffin, I would say.

The Swedish nuclear waste management over the years has been characterised by arrogance and quite a lot of improvisation. It is not logical and it lacks credibility. The choice of methodology, the choice of method was fairly improvised. The choice of sites has been equally improvised, because there was never a well-planned process, based on a kind of systematic filtering to find the site. They were trying to use short cuts. Either they drilled on Government owned property or they approached municipalities that were interested or, in the end, they went to municipalities who were already familiar with nuclear power plants. All these are short cuts in order to avoid having to face the debate and to tackle people's opinions head on. I would say it is better a system when you localise ordinary garbage dumps because

that is what I do in my everyday life. It is far more systematic and logical.

So what does a nuclear waste network and the other groups' influence in these processes? This goes through consultation and working with public opinion at different levels, but as I said, we are definitely at a disadvantage when we come to resources as compared to SKB. They have enormous resources from the nuclear waste fund that they can apply in their enormous propaganda machinery. The authorities have far less resources and the environmental organisations have more or less no resources at all.

Of course it is difficult for us to keep up because there are miles and miles of complex reports being published, there is no chance we can read them all. We are being asked to participate in different groups, for example, in the feasibility studies in Oskarshamn. When we do not participate and explain ourselves by saying that we do not have the resources and we do not want to become hostages, then that is used as an argument against the entire environmental movement.

We are also of the opinion many times that what we say is being ignored. They say we are not rational just because we are against this. There is a general tendency in Sweden that people that are pro nuclear power are intellectual and rational and anyone who is against is irrational. We see this attitude quite often both on a national level but, above all, may be on a local level.

We have of course some measure of influence and on a number of occasions we had the opportunity to influence it. If we ignore the dialogue project now, which was definitely a positive aspect, so far we can see that the only positive effects is direct actions. We actually managed to stop one of these processes or we succeeded in creating an opinion because we were there before SKB and with our limited resources we managed to inoculate the population of a municipality.

But on the other hand, we have also had many negative experiences. As I mentioned we were expelled from the collaboration forum. Ever since the dialogue project we have stated that it would be reasonable that an environmental organisation should receive financial resources and funds. We have constantly pressed on that, but we consistently received a negative response.

Another thing was one event that I would like to bring up as well. SKB publishes an information sheet called the "Storage paper" (Lagerbladet). The managing director wrote a few years ago in that info sheet that he would love to see collaboration with environmental organisations, but the environmental organisations so far have been sabotaging the process.

I can not remember his exact words, but that is what he wrote. And I feel that that is more or less a declaration of war against the environmental organisations from SKB. We are of the opinion that we are honestly trying to participate in the process and contribute positively to it. This was again a reflex of the view that when one is critical about it, one is irrational and is a saboteur. In the ideal world, of course people do not protest at all, no one says no, and everyone accepts.

Maybe it is obvious from what I said so far, that in our view SKB has no credibility at all. We cannot accept SKB as the main player when it comes to managing the nuclear waste issue in the future. In addition, we can also see that SKB are very good at portraying themselves as something that they are not. Many people in Sweden, even decision makers, still believe that SKB is a government agency, in spite of it being a company owned by the nuclear industry who only represents the interest of the nuclear industry.

The authorities in our view are fairly cowardly and unfortunately fairly powerless. What we lament above all is that in spite of their unanimously backing up the conclusions of the dialogue project, there is lack both of power and will to actually implement those conclusions. I will come back to that later.

Now the acts of the municipalities are very often arbitrary in our view and they often have fairly limited knowledge about it. I have to say that Oskarshamn is an exception to the rule, and that is why we are in Oskarshamn today. If this seminar had been held in one of the other municipalities, I do not think that we will have seen the corresponding description of what happens on the municipal level. So Oskarshamn is a very positive exception when it comes to the management of the nuclear waste, independent of the peripheral aspects in some of the municipalities.

Now lastly, what does the nuclear waste network feel about nuclear waste in general? This meant very much a reflex of what the dialogue project concluded in 1993 and it also reflects very much of what I actually heard from other countries so far during this conference. The choice of method and site has to be after a process and a credible method that was presented beforehand. The choice of method must be taken before the choice of site. The choice has to be made based on safety and environment and not on political acceptance.

The SKB process has to be led by an independent body in order to lend legitimacy to the site and the method, and the imbalance between the players has to be evened out. Above all, the environmental

organisation has to be given the necessary resources to act independently and hire their own experts, which reasonably would increase the knowledge and competence in the total process, or contribute to the process. I actually represent ordinary people in these cases. You have to make sure that these organisations also have sufficient funding to be able to participate. Thank you very much.

Discussion

MR. KRIS VAN DYCK

Thank you very much for the messages you gave us. I come from the Municipality of Dessel, in Belgium. We also have in Belgium a local community, a village where all the nuclear waste of Belgium is temporarily stored. I think there is a lot of similarity with Oskarshamn. Now I have a question to the latest speaker who talked about municipalities where there was no interest or less interest to start some coalition with federal government about this problem. Isn't it normal that there is no interest in municipalities where there is no nuclear history? A small interest of the people is necessary to start such things up?

I think that is one of the basic things you need. Secondly, I also see in the history of Oskarshamn that at one time - and you did not mention it - a decision was made to build a laboratory under the ground. Was the municipality involved with the decision about Äspö Hard Rock Laboratory? Was there or not a communication with the municipality? In my town, they also started in the year 70s with the laboratory under the ground. And of course we have the laboratory and the waste already in that place, and then the link is very easy.

So here are my two questions: is not it logical that in these cities there is a greater acceptability for these discussions? Secondly, was the first step of the laboratory communicated with the municipality?

MR. OLOV HOLMSTRAND

I think there are two parts in your question, if I got it right. One is why it is easier in the communities where there are nuclear installations. Of course a lot of people in those municipalities are engaged by the nuclear industry. That is not only valid concerning nuclear industry, it is valid concerning anything disturbing. If it is rare and you can gain from it, you are more positive.

The other part of the question is how to get people interested in the municipalities where there are no nuclear installations. I think the only means to start that interest is to present some distinct action or proposal. The experiences in Sweden showed that if there has been proposals for test drillings, etc., then the debate had started on a local level. For the moment and earlier, there has been no broader discussion in Sweden. But one means to start a broader discussion will be to present a large list of proposed sites, just to start the discussion at all the places where these sites will be located.

MR. CLAES THEGERSTROM

First of course I can agree with you on that. At the outset, it is probably more easy to start the dialogue near existing nuclear sites, but in our work we have not been limited to that even if, in the end, we have selected two nuclear sites and one non nuclear site for the continuing work of the siting.

Regarding what Olof said about presenting a large list all over the country of sites, I really do not agree. I think it could not be a good basis for starting good discussions. I think the people involved will have to be involved in developing those lists, otherwise it will be something coming from some expert group or national group. And that is why when we made feasibility studies, we did go into the municipality saying: "Your site is of particular interest. You have in general potentially good rock, you have other features that are of interest. Let's together develop the questions you have, the questions we have, and let's see what sites would come out of such a joint process". That has been our way of working on this.

MR. TORSTEN CARLSSON

I do not agree with Olov's conclusions there. As regards the laboratory, I have to say that the municipality had quite some influence over the planning and the implementation of this laboratory. We also made sure that there was no public access road to this laboratory. When people said: "We do not accept too much of a disturbance of the national environment, so we do not want to build a big road to this place because that would affect environment", the industry came back and said: "We will build a tunnel instead". We had influence over the road, what it would look like and where it would be located.

We had influence over quite a few other issues when it comes to environmental aspects.

When it comes to municipal regulatory bodies, we had influence in all different aspects that concerned us. There are a number of people here in the municipality council that can verify what I say here when it comes to how we should re-route the water on the roads and many other things. We had quite some influence over how the laboratory was built.

MR. KRISTER HALLBERG

Just one important thing that Torsten failed to mention and I brought up in my lecture. This is something we really discussed quite extensively. We said: "Is this the start to a repository eventually? Does this implementation of an underground laboratory entail a repository in the future?" We emphasised in the decision that this is not a repository eventually, it is just a laboratory, and nothing else.

MR. NEALE KELLY

Personally, I think it is a political issue. If we ought to have dialogue, we need to ensure that the various parties have appropriate resources for this. I think most people here would probably share that view that some mechanisms need to be found, and clearly the Swedish Government has, I think, done an excellent job in funding local authorities, and that is for me an important step forward. But an expression we have in English is "The devil is in the detail".

In principle, I would totally support the funding of participating organisations; the issue is how to do this in practice. The speakers might have some views on how decisions should be made on this and who should be funded. What is legitimate? Do you fund all environmental groups, do you fund those groups that are supporting the activity? Do you support labour unions? So, how can we convert this principle, which I think is well-based, into something that is practical and brings legitimacy to the process?

MR. PHILIP MODING

I was the main secretary in the famous AKA Inquiry and I have to say that I have never seen, I have never heard a more incorrect summary of that inquiry this afternoon. It was not at all like what Olov described it. We were way ahead of our area in Sweden. We got some time over a hectic prime minister called Olov Palme. He gave us some time to initiate an inquiry about radioactive waste in the beginning of the 70s.

I have no shares in any nuclear power company. I have tried to stay neutral and objective, but I do know that that piling up of lies that Holmstrand is contributing with today does not lead anywhere but to pure opposition. It is an amazing collection of lies that you heard here about the Swedish nuclear waste programme that in that time was way ahead of the rest of Europe. We knew that we had a good crystalline rock in Sweden. We did not know sufficiently about it in 1973. We were actually the people who initiated the programme to improve the knowledge about behaviour of crystalline rock, and that resulted in a series of interesting objective geological studies of our crystalline rock and bed rock in other countries.

I am very happy to say that we started in time, and I am certain that the people who have nuclear power plants in Sweden are deeply offended by Holmstrand's statement that they are ignorant about nuclear power. I know people in those municipalities, in Östhammar and Tierp, in Nyköping (Studsvik Laboratories), in Varberg (Ringhals NPP), Östhammar (Forsmark NPP) and Kävlinge (Barsebäck NPP). There was an intense information campaign about the pros and cons of nuclear power. I know that the inhabitants there are very well aware of the issues. I also know that after 30 years as a regional planner in the Malmö area that garbage dumps that Holmstrand seems to be an expert on are no better managed than it is here.

I do not know really of any site investigation in Swedish society planning that has been the subject of so much attention and care as the localisation of sites for repositories and storage. Thank you.

MR. OLOV HOLMSTRAND

I just can say that this was an example of what happens when we are critical.

MR. FRANCOIS DOSE

If a municipality accepts the beginning of the work in its area and the elections bring in a new team that vetoes it, what happens?

MR. OLOF SÖDERBERG

The process is designed in such a way that it is possible to withdraw from it at any time. You can actually present your veto at any time during the process formally. It is when one particular site is selected before a detailed characterisation that the veto power can be executed from a formal point of view. But as I mentioned earlier, there is a consensus that this veto power in effect can be used during the whole process.

MR. KURT-OLOF CARLSSON

My name is Kurt-Olof Carlsson and I used to be a member of the municipality council here. I would like to correct Torsten Carlsson to a certain extent when it comes to the road to Äspö Laboratory where the laboratory is now located. What happened was that the inhabitants there reacted strongly to the fact that they would be subjected to this environmental pollution and they actually were behind the decision that the company then made to build the tunnel. Thank you very much.

MS. CHRISTINA LARSSON

I come from Tierp, which is a municipality where there has been a feasibility study, north of Stockholm. It is very unfortunate when there is a polarisation like the one we just saw, that is very common in Sweden and probably in many other countries with the similar kind of problems.

I think what we all want in this room is a good way of storing our very dangerous fuel and we need to find a process where all the important questions are put the table and are not held under the table. Sweden is often held very high, I noticed, by other countries, because our municipalities get money to follow the project. However one very bad thing in Sweden, I think, is the acceptance.

The company SKB has the technology, they think, and has the funding. So what they need now is one municipality to say yes. So they seek acceptance. Acceptance is what they have. They actually have 5 municipalities that have almost said yes. The danger in this is that since they seek acceptance, it is very dangerous to talk about dangerous questions, sensitive questions, as a future import of foreign fuel, for example. Import of foreign fuel is now forbidden in our legislation, but the laws can change, we do not know what happens.

They also do not want to talk about what we are dealing with right now : these nice metal canisters. There is also one more storage that probably will end up in the same place : the part from the reactors and its historical waste also. I think the authorities do not know what it contains. It is hidden in a shadow, we do not know much about it. It is supposed to be put in concrete canisters which is now very dangerous to talk about because if the storage space is doubled, the transport into the country on trucks will also be doubled. This is very sensitive because local people might say no.

I think it would be better that instead of seeking acceptance, SKB would seek the best place possible from the geological point of view, and maybe some places that are not really willing to take it, so we could get all the uncomfortable questions up on the table. It would gain us all in the long run.

MR. CLAES THEGERSTROM

I just want to comment because I would not like to stay with the impression that at SKB, the prime objective of our siting process is to find acceptance. We have no use of acceptance unless we have a safe site. There is nothing we can do with acceptance without a safe site. And I also think that people will understand this issue well enough not to accept anything but a safe site.

So the prime objective has to be a safe site. But if you have a safe site and you do not have acceptance, you also have a problem. That is why at the same time, as we look for safety, we have to look for confidence, local trust, understanding of the issues, and that will help us. If we look for that, I think that will help us to find also the safe solution. So they go hand in hand and they are not in opposition to each other.

MR. HANS JOST HERMANN

My name is Hans Jost Hermann from Switzerland. Switzerland is a tourism country and that is the background for my question now. What are your experience with the local tourism? How it affects your nuclear projects in this region, and do you have also feasibility studies in this point of view? Can you make a statement please?

MR. BENGT LEIJON

I can comment on what we have done in that field in the feasibility studies. We have compiled the information in retrospective of how nuclear establishments and for that matter other controversial establishments have affected tourism on a local level and national level. From the data available, we cannot really see that tourism has suffered from the nuclear establishments so far in Sweden, and we do not think that the deep repository would have a negative effect either. But of course there is room for changes in attitude in the future and we can not forecast those, but from the data available, that we have looked at, and I think we have looked at everything available, tourism has not suffered.

MR. TORSTEN CARLSSON

What we can say on behalf of the municipality is that we have not seen a reduction in tourism because of our nuclear power industry, but on the other hand, we do not know what tourism would be if we did not have it. We know that it is visited quite frequently and we know that we have Oland, an island just off our coast with 1.8 million visitors annually. So we do not perceive any reduction in tourism and we looked into this. We did some research this year and we couldn't find anything pointing to the fact that nuclear power fact could affect tourism negatively.

MS. JENNY LUNDSTROM

It has been mentioned several times that we have a municipality veto concerning nuclear waste. The reference told by the panel here is that the Government has said that they are not going to use their right to overrule a veto on this issue. But we need to look at how it is stated in the law, because that is what we are going to act after. The Government today says something, but we do not know what the Government will say 5 or 10 years ahead. In the law, it is right that there is a municipality veto to some projects, but there is also a right for the Government to overrule this veto, a "veto ventile", and a nuclear repository is one of the project which have such a ventile. We do not know whether the Government is going to overrule the municipality veto or not. But we know already today what the law says, a law that have been stated by the Parliament.

The government may use veto ventile. I think there will be a political pressure to not use this ventile, but it exists, and we can not deny it, we have to pose the question. We have to be allowed to pose that question. We can also look back one or two years back. This veto ventile was used for a much more minor area than a national waste repository. It concerned a cable for electricity between Sweden and Poland. The municipality was against it, but they were overruled by the Government.

There is also some sort of recommendations on when this veto ventile is going to be used, in the pre-work

for the actual law. But after Sweden has become a member of the EU, it is now the law that rules, not the pre-work. We have had a juridical tradition in Sweden where the pre-work to the law was very important. As we now are in the EU, the law-text has become more important than the pre-work. I just want to tell you this because you can get the impression that the municipalities have a very strong position in Sweden. Politically it is true, but not juridically. We do not know how the government will act when the question arrives.

MR. HARALD AHAGEN

Olof, what is the strict text?

MR. OLOF SODERBERG

Basically Jenny Lundström is correct, but with one important exception. This possibility to overrule municipality veto according to this legislation has never been used. You have misinterpreted this. The fact is that the legislation has never been used in practice. Other legislation has applied in the case that you have mentioned.

MR. DETLEF APPEL

My name is Detlef Appel, I am a member of the German committee on the site selection procedure. I would like to come back to a problem which was addressed earlier by Neale Kelly. It is about funding. I think the perception of what is the right method of funding is different between the officials and the NGOs. My question is which organisation becomes funded for participating in the decision making process, by which criteria? Are there criteria?

MR. HARALD AHAGEN

I can just mention that in the municipality of Oskarshamn, which is getting funding from the waste fund, environmental organisations that have an interest to participate in working groups, will get funding from the municipality. The criteria basically relates to the interest shown by those organisations to participate extensively in these working groups.

Moreover if they want to bring in experts, the municipality will pay for those experts, their time, travel, and accommodation. I think the issue here is for the national level, mainly environmental groups that have a standing in the environmental act.

MR. OLOF SODERBERG

There are no rules at present allowing the Government to use money from the nuclear waste fund to fund central environmental organisations. But on the other hand, in the last decision from January 2000, the government said that it is considering these problems, but up to now it still is considering.

MR. OLOV HOLMSTRAND

We are waiting for that decision and of course we are waiting for what rules should be applied on it. We have not decided any rules. We have just pointed out the problem that this question is so big and complicated that if we are going to get into this issue in a deeper way, we need expertise, and that expertise has to be paid in some way.

MR. CLAES THEGERSTROM

I just want to add one comment to highlight that. Of course in the task of SKB, the central part is to find the facts, the technical and scientific aspects needed to implement this project. In that work, we are looking simply for the best experts. In some cases, these have been on the critical side in the public debate in the overall question on nuclear waste. They were asked to make studies on particular issues

and they were paid by SKB. That is the way we proceed. We have no bias, as I see it, in how we select the experts except that we look for the best scientific competence available.

MR. THOMAS FLÜELER

My name is Thomas Flüeler from the Swiss Federal Institute of Technology ETH and I would like to come back to the siting criteria. In their review of the SKB 98 programme, SKI demanded that SKB specify the minimum siting criteria. I would like you to elaborate on that: has this been done in the meanwhile and what are the corresponding scientific and non-technical criteria?

MR. CLAES THEGERSTROM

When we started the feasibility studies, we made a chapter in the 1992 report on siting criteria concerning this first phase of the siting process. That report was reviewed and some comments were made requesting more precise information on certain aspects. Then when searching for areas for the feasibility studies, we always started with a list of criteria relating to bed rock characteristics like voiding mineral resources, and other aspects of geology that Bengt Leijon could give more details on if you are interested, and then of course other types of criteria, like industrial land use criteria and so on and so forth. We had a set of valid criteria for the feasibility phase.

Now the particular report I think you referred to is a much more detailed report on the siting criteria we will use when we start siting investigations and drillings. What are we looking for? What conditions deep down in the bed rock could lead to that? There is a report about one hundred pages discussing that and developing a list of different criteria of that kind. To give you one example, a certain proportion of salt in the deep water has not to be exceeded in case the site should be considered to be valid.

Finally still, one has to realise that even if siting investigations show that we fulfill all these lists of criteria, that is not a green light to make a repository, because such a decision will need a full scale, long-term safety assessment where all the knowledge is put together in a systematic way. This safety report will back up the licence in the application. That will be the key document for determining if it is a safe site or not.

MR. MAGNUS WESTERLIND

My name is Westerlind from the Swedish Nuclear Power Inspectorate. I just want to make a comment. It is correct that when reviewing SKB's research programme from 1998 we asked for a more comprehensive list of siting criteria. As Claes Thegerström explained, it was not mentioned that such a report existed. It was finally reviewed and it was one of the basis for our recommendations to the Government earlier this year.

So the report exists, it has been reviewed and we are generally satisfied with it, but we stress, as it has also been just said, that the final decision must be based on the comprehensive safety assessment. We also wish to see this compilation of scientific siting criteria be kept alive throughout the siting investigation, because certain criteria will be modified or have to be modified during site investigations. Some criteria will probably disappear, and there will be new ones. I would guess that this will be constantly under review under the entire site investigation phase.

MS. JENNY LUNDSTROM

This is really one of the most crucial points concerning the Swedish way of siting. I think it was quite clear from the answers that the criteria for siting have not really been adopted and therefore have not influenced on the selection of the three sites. We have now only three places for drilling. SKB and the authorities bring forward the argument that everything will be questioned during the formal process that will be 10 years ahead.

I am living in one of these communities and I want to see the reason why my community will become a drilling point where the nuclear waste may be stored. I want to see a logic process, I want to see in what way my community is more suitable than all the other potential sites in the country. Even though there are not so many criteria that can be used during this "pre-drilling" stage, the ones that exist have to be used. I will give you a lot of other comments tomorrow when I am talking about the feasibility study in

Sweden.

Third case study : Tierp, Sweden

MR. OLOF SÖDERBERG

The time has now come for the third case study, the Tierp case. As yesterday, the case will be presented from different perspectives. One is the perspective from SKB, the project leader. The second perspective is that of the municipality, and the third one is from the perspective of a local NGO. The persons who will be talking today is first Saida Engström from SKB. And then from the municipality, we have three persons who will make the presentations, two politicians, Lars-Peter Hallstrand, and Erland Olsson, and the third one is Torbjörn Lennartsson, project manager. The last presentation from a local NGO will be made by Jenny Lundström

Feasibility studies in Tierp

BY MS. SAIDA ENGSTROM

Thank you, Olof. Bonjour, messieurs, mesdames. Good morning, ladies and gentlemen. What are we talking about is the siting activities for the feasibility study of the community of Tierp. Since I have the advantage to have my colleague Bengt Leijon talking about the feasibility study of Oskarshamn, I would not be telling you very much about the methodology since it is very much the same we have been doing in all 6 feasibility studies, actually all the 8 of them.

I will be focusing my presentation on the specificities of the community of Tierp and also on the the 50% activities, I would say, that make a feasibility study a feasibility study, which has nothing to do with geology or infrastructure or anything else, but which has to do with what we call a dialogue. I will be coming back to that.

So what is different about the municipality of Tierp? If you compare Tierp to the neighbouring community of Östhammar, which is in the same region, or with Oskarshamn, there are no nuclear facilities in Tierp. The community has the land area of 1,540 square kilometres, about 20,000 inhabitants. 70% of the municipality is a forest land, 15% arable land and pasture land, 15% other kind of land use. Tierp is located on the the coastal side of the Uppsala region, which is together with Stockholm region, the more expanding region in Sweden.

I will not be telling you much about the community side. My colleagues from the committee of Tierp will tell you more about it. I will tell you more about how we got into the community of Tierp. In June 1998 all parties in the municipality council of Tierp voted unanimously to let SKB carry out a feasibility study. An SKB office was opened in the beginning of 1999 and two luckily recruited persons got the task to engage a dialogue with people in the municipality. It is interesting to say that they are not some shrewd, PR, educated people. Ms. Anderson had her own business, and Mr. Anderson - they are not married actually, they just happen to have the same name - is a trained nurse. They are the people among people and their task is carrying out a dialogue. I will be coming back to that.

A working plan for site investigation has been put forward. This is the working plan where we explained what we are going to do in the community as regards the feasibility study. It has been reviewed and okayed by the municipality in order for us to start our activities.

So what did we do? You heard some of what the feasibility study is all about from my colleague Bengt Leijon yesterday as regards Oskarshamn. It is pretty much the same. Of course we did not have the advantage of having facilities in the same community. In Oskarshamn are already located Äspö Hard Rock Laboratory and the CLAB facility, the interim storage for spent fuel. We have very much to find our ways, but the investigations were very much the same: investigations about long-term safety, technology, land and environment, and society.

The safety factor has a lot to do with the geology: what do we have in this community? Are there spots that would be suitable to use, and that would meet some of our criteria at least at a feasibility study level? The technology factor is about transportation : what kind of infrastructure is there for us? How could we transport, if we need to, this waste to the final repository? As regards land and environment we

just had to be able to establish such a facility without getting into conflict with any other interest, environmental, cultural and others. We had, of course, to look at environmental protection : what is there that should remain protected ? And there are societal aspects: infrastructure as regards, for instance, competence. Will we have enough people that would be able to work in our facility? How would such a facility impact on the societal aspects of the society?

Here is, for instance, a map that would summarise the areas of interest for us and areas that are protected. The different ways of protection according to our laws and the regulations are mentioned. This means that there are still a lot of spots that are possible. The geologists came out and showed the spots which they said have promise in geology. They actually said : "We do not know, but we think, according to the data we have, that you could locate or investigate further in those parts".

The experts in infrastructure and transport had to look for means of getting the canisters into the final repository since Tierp does not have their own harbour. Once we prioritised a spot in Tierp here, east of the Uppsala ridge, we decided that there is an alternative of getting the waste in the neighbouring community of Älvkarleby, which is also involved in feasibility studies and transport. It maybe by railway to the final repository if one is built on that spot one of these days in the future.

All this data is gathered. Someone talked yesterday about the amount of documentation that SKB produces. This is right. Each field I have been talking about is actually summarised in one of the reports and everything is summarised in the final report. But each time each report is summarised in a legible, understanding language for a layman, and I will be coming back to that.

Reports from each discipline is presented to the municipality. This is very important. We made an investigation and we made a report. Then we came to the municipality to present it, or actually our investigators presented it. It was presented very broadly, not only for the people, the working groups whom you will be hearing from, my colleagues in the municipality that did the review work, but also on the larger scale, to the inhabitants of Tierp in different meetings. We were being there with our investigators to answer the questions. This preliminary final report, summarising all the findings from the feasibility study was put on the table for the municipality's review and scrutiny in February 2000, and they had till November 2000 to review it. They took the time they needed.

In November, we got a statement from the municipality. It was quite a thorough review of our preliminary final report. The community did a tremendous job on actually putting their finger on questions where they would like us to do some more. The municipality came up with a demand for complementary or additional investigations. I think you will be hearing more about that from the municipality, but it is very important to see that following our work, there is a review, and a demand of additional investigations which we are carrying out. This goes from transportation to sociopsychological aspects related to establishing a future deep repository.

I think I will use the last minutes talking about what somebody yesterday labelled as propaganda. I do not know how he did it, but actually when you talk broadly about how to have a relationship about this difficult issue with inhabitants in communities, everybody agrees there should be a dialogue. We heard that about Nirex, Nirex wanted a dialogue. Everybody wants a dialogue, it is very important. When an implementor starts a dialogue, it becomes propaganda. However you have to start somewhere, you have to do some work, and you have to give the people the credit of being intelligent enough because they are, to know the difference between getting informed, getting the knowledge, and being indoctrinated. That is an experience I have been personally doing for 15 years and I can stand for it.

So we meet lots of people. Actually we have met so far 9,300 people in a community of 20,000. These 9,300 people were met for more than one hour, in face to face dialogues with discussions, with questions and answers. Some were opposing us, some of them were not. But there has been a dialogue, a very important one. And these 9,000 were met actually since the beginning. We started in the beginning of 1999.

The average number of the people we meet each month is about 300. Among them 53 come to SKB information centre. This is not so many people. So if Mohammed does not come to the mountain, the mountain goes to Mohammed. We go to people, we go to people in small markets, in working places, wherever they are, we want to meet them. This also has been criticised, but we think it is very important, and we do it. We have been carrying out seminars. In these seminars, we presented methods about the technology, the laws governing our work, the ethical and democratic aspects. You cannot talk about it once and forget about it. This is something that you have to talk about it once and once again. The psychological effects are something that people are very keen on talking about. I think you will be hearing Erland Olsson about it. People want to know what other countries are doing. There is a major

interest in what happens in these eastern countries. We have problem, we have competence, we have the money, and we have the political stability. What are doing the people that do not have all that? We talked about it, and lots of other issues.

Dialogue, I think, for such a difficult question as this one is the way. Nobody is a winner on putting false labels. A dialogue is a dialogue. I think even a layman would have to be given the credit of being able to segregate between rubbish, information and indoctrination.

Municipal experience and perspectives

BY MR. TORBJORN LENNARTSSON, MR. LARS-PETER HÅLLSTRAND AND MR ERLAND OLSSON

MR. TORBJORN LENNARTSSON

Good morning, my name is Torbjörn Lennartsson and I am hired by Tierp's municipality as a project manager. I have been doing that since November of 99. It is in the north of Uppland on the east coast between the municipalities of Östhammar and Älvkarleby. Together with them we form the region of northern Uppland.

On this issue of nuclear waste management, we cooperate within that region when it comes to information and training. That collaboration was formed on the initiative of our local politicians. The municipalities there have very strong industrial traditions. 30% of jobs are still in manufacturing. Politically, the municipality is controlled by the social-democrats that have 24 seats out of 49.

So why did Tierp tag on this process? The sites that were examined in Östhammar were only a few kilometres away from our municipality border. And if there will be a site in Östhammar, of course that concerns Tierp almost as much as it would if it had been within the municipality borders. Another decision we had to make was the moral, ethical choice which we have here together. We use all of us electricity from the nuclear power and we felt it was our obligation to partake in this process to try to find a solution for the nuclear waste. A third point. It was just pure egotistical. The material that SKB published for the municipality is very valuable for the future long-term planning work, some material that the municipalities themselves had to produce, but it would have cost us quite a lot. Now we receive it for no charge.

After the municipality said yes to the feasibility study, a committee was formed to propose an organisation for it, and guidelines it would implement. The municipality saw the benefits of having an organisation with a very wide range in representation but with not too many people involved. With that in mind, they suggested one representative from each party in the municipality council and then also a few representatives from different interest groups. Those interest groups that were suggested were the environmental movement, parents with small children, the interest group or the lobby group SOS-Tierp who we will be hearing from soon, and the unions and representatives from private enterprise. Furthermore, we have a project management with a political coordinator and a press officer, and, of course, a project manager.

This is what our project plan looks like. We have the municipality council on the top. Then we have the board of municipality, which are our nearest managers. Furthermore, we have a project manager, a political coordinator and then a press officer and a reference group. This reference group is made of the people or representatives that I just mentioned. Then we have the inhabitants of the municipality on the bottom here. This group is going to be called the "reference group for the storage of nuclear waste". It will work with information and reviews.

What we took upon to do is to disseminate a very comprehensive and objective information about this entire issue to the inhabitants of the municipalities so they know what they are talking about when it comes to the point when they have to make the choice. Furthermore, we provide feedback from the inhabitants, their opinions and their views back to the reference group. Furthermore, the reference group would participate in the reviews that are put from SKB, to make sure that they themselves accumulated the necessary knowledge. Most of what is discussed about this technical project had first to be learnt: the technical background of the concept which will be implemented, etc.. Furthermore, we undertake actions to improve the knowledge about this among the elected politicians: this is "internal" information.

When it comes to external information, we have held 47 meetings from the date of the inception of the feasibility study. We have talked to about 1,700 people. We have organised study trips to the nuclear power plants here in Oskarshamn since the beginning of 1999. We have been down here 29 times and around 1,180 people from Tierp have visited Oskarshamn. In this case information not only comes from the municipality but from SKB as well with their press officers.

There was a new thing this autumn. People from Tierp boarded the bus from Uppsala to Stockholm (the trip is about an hour), and they disseminated information about their position and their opinions about this entire process to the people that go down. After the visit to Oskarshamn, on the way home, we made a stop-over in Stockholm to meet Government authorities involved. They informed us, and by that time, of course the people travelling with us had been informed and asked the authorities a number of questions as well. It works very well. I think this is a good way of informing the public.

Of course we are also present at markets and local events. We have done that about 15 times so far. How many people we meet there? We have no idea really. There are enormous amounts of people around these markets and the local events. Some people do not want to touch this for the time being, but other people become very interested and want to know more about it. We also put in ads. Once a month, we have a full page in the local info sheet financed by advertising that everyone in Tierp's municipality receives. We inform about the current events, what we have just recently done, and what we can expect for the near future.

So we keep the public fairly updated about the ongoing process. We also have of course a website: <http://www.tierp.se/karnavfall/> Several months before the municipality had finalised that organisation, there was a working and active interest group in Tierp. They call themselves SOS-Tierp. In Swedish SOS stands for "stop unsafe repositories". If the repository is unsafe, then I would become a member of the organisation. We hope that we will have a safe repository.

This group fairly quickly adopted a decisive stance. They were way ahead in information work. We realised that the municipality needed to grant them some funds for this. After some open debate, we sat down around the table and we discussed the financial need of this group. We finally agreed that an annual funding of 175,000 SEK could be reasonable.

For 2001, this funding has been increased to 200,000 SEK, and we think this is very good with the municipality. What we may not be all entirely happy about is that the municipality has to somehow put a price tag on the interest groups. That is not really what we should do. This was fairly well sorted out in Tierp anyway. We agreed on the sum, at least on that occasion. But in the future, I think it may be better to find a different solution. I do not believe it is the task of the municipality to put price tags on value interest groups like that. We can cause conflicts. We managed to handle it fairly well, but it is not the perfect set-up.

MR. LARS-PETER HÅLLSTRAND

Let's consider the decision making process that lies before us. Saida Engström presented the feasibility study and mentioned the number of reports that we need to read. If everything goes according to the plan, the municipality council will make a decision in February 2002 at the earliest. On this basis for these decisions we had quite a number of additional demands on investigations that we would like to see carried out. They have been carried out during the autumn and they were presented in October. Erland Olsson will be going through - among other things - the psychosocial issues. We had also a transport inquiry. All this was done to see how the facility will affect our municipality in different ways. We also wanted a private enterprise inquiry. The main purpose of that one was to try that and see if it coincided with the vision of the municipality. We have developed a vision for the municipality. We divided it into 17 different issues, and then we compared this vision with a situation where we would have a repository. How would our vision be affected by a repository in the municipality? As you can see most of the points are fairly positive or sometimes very, very positive. The group that did the job said that it would not affect it at all. But in two areas, we have a negative response. A lot of families with children moved to Tierp. We can experience a reduction. During some stages of the process, that may be negative to the municipality.

The bottom sentence is : Is it safe to live in Tierp? Of course that also could be tarnished, depending on what happens. But on the whole, you could say the repository in Tierp very well corresponds to the municipality vision.

MR ERLAND OLSSON

I am the chairman of the social issues, the individual and family issues in the municipality of Tierp. I do not normally take part in this reference group. I have been recruited to survey the psychosocial issues. My group has been recruited to work solely to take a closer look at on the set of social issues : how can we learn more about it ? Aside from my political role, I am a specialist nurse within the psychiatric care. This group comprised a layman minister, a geologist, and my colleague. We had a very close look at what we mean when we speak of psychosocial issues. We started by reviewing Tierp's report. My serious remark regards the shortage of analysis on the impact of a repository on people's health and quality of life and, in the reverse, on the impact of attitudes and concern on the society's development when it comes to private enterprise and living preferences. The review shows that the report needs a supplemental analysis regarding these questions. This was the basis for our survey of psychosocial issues relating to the repository and the feasibility studies.

Our group started thinking about what is meant by psychosocial issues. It was a fairly wide ranging issue. In the core, you can see it is an essential issue like believing in the future, identity, culture. But it is also very much about issues such as the development of public health, sociological consequences, psychological effect on people, comparative perspectives of different kinds... It has also to do with the municipality image, and also with attitudes and information. So we have been discussing a plan to organise this wide range of issues. We worked in a very comprehensive way. That resulted in recruiting, together with SKB, one of the more well respected researchers in the country in the field of risk assessment and risk analysis. We were hoping for that report to be finished today. Unfortunately, it has been delayed, and it will be published later in the autumn. Through that, we hope to get a fairly good picture of people's risks perception.

As a local politician, you live in the middle of this everyday. I live about 3 kilometres away from one of the sites where this repository will be located. Of course some of my neighbours are very concerned and apprehensive about it. And some others have an opposite attitude, they do not react at all and feel that there is nothing strange about this. Somehow we have to help the people who feel concerned to live with that concern and to feel that they can enjoy the municipality anyway. The people who are not committed at all and do not feel any concern still need to be informed with basic information so they can make an informed choice.

Experience and perspectives from an NGO viewpoint

BY MS. JENNY LUNDSTROM

I am going to make a short presentation on SOS-Tierp's views on this process. I will emphasise on questions about the general process, because that is what I think is crucial concerning the nuclear waste issue in Sweden.

SOS-Tierp is a citizen organisation in Tierp that was founded in 1998. We have about 130 members and our objective, according to our statutes, is to make a critical review of the nuclear waste issue and to increase the debate on these questions. In the end of 1999, we got a support from the municipality of 200,000 SEK annually. This is unique in Sweden, and we acknowledge our municipality for that. We are working a little bit in the same way as SKB and the municipality, but at a much, much minor scale, as we do not have the same resources, even though we are doing our best with the amount that we have.

Yesterday during the dinner, I realised that I had to talk a little bit about the feasibility studies as my fellows around the table really had not understood the selection process for siting here in Sweden. The feasibility studies consist in compiling already existing data. In a municipality where a feasibility study is made, SKB starts an intensive information or propaganda work. Some parts of it are information, some parts are propaganda. And we all have different interpretation on what we put as information and propaganda. But the aim of this activity is to create acceptance among the local citizens for the siting of the spent fuel.

SKB has made feasibility studies in 8 municipalities. In two municipalities in the north of Sweden the citizens said no to further investigations after a local referendum. Three studies were made in municipalities with nuclear industry, and there had been a municipality decision in one of them in spring earlier this year to retract from the process. Three other municipalities involved in the studies are in proximity to nuclear industry; one retracted due to geological reasons. In November last year 2000, SKB proposed further investigations in Tierp, Östhammar and Oskarshamn.

The decision making process in Sweden concerning the siting starts with the feasibility studies. We do not have any legal framework for it. As an operator, you do not need any legal authority to say something about it. It is up to your own will to do the study. But the problem is that the decision making process is designed by the operator, SKB. They are technicians, not sociologists. I think that is a very important drawback of the Swedish siting process. There will be a legal judgement of the project when there is an application to build the actual facility, but that is quite far ahead, at least 5 or rather 10 years ahead.

However, already today, outside the legal framework, the arena for the decision making is closing as a very important decision is to be made by the government on the technical method that should be a planning presumption for the site investigations. At the same time SKB is narrowing down the options for siting to only 3 municipalities with this acceptance based siting process, from about 250 possible. And this is done without a selection process based on long-term security.

When you have acceptance as a starting point for the siting process, certain complications arise. In this process, the operator defines the problem as an information problem. According to the operator, there is a solution to the problem. The only thing now is to inform the public. SKB is talking about dialogue, but in fact they are not creating a dialogue, they are informing. As local citizens you cannot really influence on the things that you think are important. Also, the acceptance is formed by the information from the operator, the exploiter. This will not lead to a solid based acceptance.

The debate is also reduced to the question whether one should say yes or no to a proposal that the operator has designed. That also brings complication to the way the debate is managed locally, as the operator and other that are pro the project regard everyone that criticise the project as someone that does not want to take responsibility for the nuclear waste, and these persons are therefore marginalised in the debate. I am here on this seminar because I want to take the responsibility for how the nuclear waste is handled.

In the Swedish process, SKB is dependent of acceptance. If they loose it, the municipality will say: "Okay, you should leave". So it is a fragile process. And due to this, there is a risk for SKB to address controversial issues, such as future import of nuclear waste, co-siting of repositories for the long living, low level, and middle level waste; the right for the government to overrule the local veto right; speculative intrusions -- (human intrusion due to the creation of myths about the repositories, similar to

the pyramides), transportations etc.

The municipality is considered to be an important stakeholder in the critical review of the project. But if the first step in the siting process is to exclude all the municipalities that are critical - will there be any critical review at all? Would it not be better to have all types of communities reviewed in this process, not only the ones that say that: "Yes, we accept your activities". In the Swedish model, there is a bias in the process that decreases the quality of the final outcome.

In fact, we have to face the straight question. Why should anyone accept a nuclear waste dump in his backyard? Here in my hometown, why should I accept it? And on the street, when SOS-Tierp are out informing, we meet the opinion very often, which I am very proud of: "If it is best in Tierp, then the waste should be here". I really agree on this opinion. What people mean when saying "best" is long-term security. Then my question is: Do we as local citizens have the same ambition as the operator? For SKB the ambition is "Good enough". The authorities have earlier said they also had that ambition. I hope there is some sort of changing process among them now, but I am not really sure. Our municipalities have shown that they want something that is better than good enough, but only among these three sites that already are selected, not on a national basis. But the nuclear waste is a national problem.

Another question is how to decide on how to best meet the safety demands. This leads us to the choice of technical method and the siting. As a layman, it is important for me to know what type of decision process we have for this selection. Do we have a technocratic or a democratic approach to the problem?

In Sweden the formal decision concerning both the method and site will be based on a safety report presented in the end of the process when there will be an application from the operator to build the waste facility. So, as a layman, we have to rely on the specialists that develop the criteria that will be used by the operator. Instead, I would like to see a decision process in which logic steps that we can follow are taken and also where the different stakeholders have the possibility to influence on the selection criteria. In such a process, you can have confidence in the outcome even though you can not understand all the technical aspects.

In the end, the thing that we have to trust is the decision making process. We can understand that. Our politicians should be able to understand it. But in the debate, we nearly always end up in discussing technical details, even though we all say that it is democratic and ethical issues that we should discuss.

Further on, there are some difficulties here. How should we create a debate in the whole society? Here is the real crucial point: How should these people that will be the stakeholders in the future be involved already now? I think personally that we need a very broad siting process and clarify things: "Hey you, you might have a nuclear waste dump on your backyard", and we have to understand that there is nothing wrong to react negatively on that. The reactions of all kind of stakeholders are very important to get a good decision in the end.

So what should we then do? Yesterday the Dialogue project that was ruled by the authorities from 1990 to 1993 was mentioned. In that project they were searching for a legitimate decision-making process and they were talking about a site selection process based on beforehand known exclusion criteria. Today we have a site selection process based on the inclusion criteria political acceptance, which is not accorded to be important by the public because the public is searching for safety, not for political acceptance. The Dialogue project also talked about the question of resources. We can not get a good dialogue if it the exploiter is the only one going out with information. It is impossible. And I also would repeat what I said a little bit earlier: we should search for the conflict areas because those are the ones that will increase the debate and improve the outcome. I feel that SKB is avoiding the conflicts, something that will be costly in the end.

Also, when you are on the local level - and I think my municipality will agree on this - both the exploiter, the operator and the regulator have to respect the working conditions that we have at the local level. And we have had problems here in Tierp. SKB took the decision that they wanted to go further in Tierp before we had handled our review of the preliminary feasibility study. Certain steps have been taken by SKB before the process in Tierp had been fulfilled in certain aspects.

Finally, I should say that we have a website, it is in Swedish, and there is a lot of information in it.. We quite often react on proposals from the authorities, from the municipality and from SKB, you can find all these on our home page (<http://www.sos-tierp.nu>).

Discussion

MR. OLOV HOLMSTRAND

I couldn't resist my reflection on propaganda versus information, because Saïda Engström definitely addressed me concerning that. Jenny Lundström has made some comments on it, but I want to stress what she said.

What has been going on in these municipalities with the preliminary studies is not a real dialogue, it is a monologue from the SKB. To some part, and gradually it has become a little dialogue, but it is a dialogue completely on the conditions of SKB because SKB is carrying out the preliminary study and they have huge amounts of resources to present their view of it.

So generally SKB is really steering the whole process. I really must stress that what it is about in the preliminary studies is that SKB is trying to force through their own idea of how things are and what they should do. I think this is very dangerous and it is even more dangerous considering that this is outside the formal process and it is before the formal process as Jenny Lundström has described.

So I do not agree at all with what Saïda Engström has said. I am sorry to say that it shows that the SKB are not aware of this even. They have heard it several times, but obviously they really have not understood it.

MS. SAÏDA ENGSTROM

I remember Voltaire said: "I do not agree with what you are saying, but I will fight with my life for you to be able to say it". I am an expert within this area, but I am a layman in many other areas, and I really would not like anybody to come and patronize me by telling me this is propaganda. This you should not be hearing, because you cannot segregate if it is propaganda or a dialogue.

My point was only that everybody, regardless of what kind of opinions one has, everybody should show some respect for the people in the communities. Do not despise them. They are much smarter than that. This is my only point.

MR. ERLAND OLSSON

As a local politician, I see that we are many in our community, maybe a hundred politicians in different small types of the issues we work with, and you have the opinion group too, and we live in this area for twenty-four hours a day. We meet people in the shops. We talk to each other, to our neighbours. We discuss this, and I think there is many different ways of discussing issues in the local area, and I believe people all are interested in these issues. Some are worried, some do not worry at all, and that is also worrying me, because I think you have to make a decision based on knowledge, not just relying on other's thinking. So I believe we have quite a broad process in the local area where many are involved.

MR. CLAES THEGERSTRÖM

First, a very brief comment on the siting process. I think it is interesting and good that SOS-Tierp gives some ideas about how they would like to see a siting process. I do not know by the presentation of our process that we are just looking for acceptance. I think I said yesterday we had no use of acceptance on its own but we also need to find a safe site wherever it is accepted. So safety and acceptance they go together.

But my question is: What is the role of acceptance in the process you see? To take a very clear question. In the case where a municipality council has more or less unanimously said: "We are not interested in discussing this issue. We do not want to be part of the process", there is a clear democratic, political sign they do not want to participate. Should they be forced to participate anyway or how do you handle such a situation?

MS. JENNY LUNDSTRÖM

It is very good that you posed that question because when I went back here, I realised that I did not comment on that. It was not on the overhead, it was something that I was going to talk about, but I forgot it. So it is very good that you bring forward that point.

The role of acceptance should be the product, the outcome, not the input in the process. I really appreciate the municipality veto that we have in Sweden. I hope that, in the end, there will be the safety ventile if everything else is going wrong. But still I have a trust in the society that I live in. And what I would like to see is to have a very blunt - and now I am just talking from a personal perspective - a very blunt siting, something like the Dialogue project, combined with the first step of the German project, where you eliminate certain obvious, not suitable areas, and you may land with a siting process where maybe fifty or hundred municipalities are involved.

We have a common responsibility for the nuclear waste. I do not accept that I and 1% of the Swedish citizens will have to bear the responsibility in reading these reports, going to meetings, offering my private life for acting in a question in which there should be a broader interest. But due to the features of the nuclear waste, we can only create this broader debate by getting more people involved; and people get involved when they fear that there might be a siting in their place. I do not say that the waste should be sited where people are against it. Instead, the process should create an arena of municipalities where the facility might be sited, and out from that, all potential stakeholders are to decide on how we are going to go further, what criteria that should be used for the further selection. But today the arena is already closed. I want an open process with many municipalities involved.

MR. HARALD AHAGEN

I have two points. One is on the funding of environmental organizations or opposition groups at the local level. I think we have had a lot of discussion both in our working group and here in the plenary session about funding for various groups. I think we should divide them in two levels: the national, and the local one. On the local level, what body is better to judge who locally should have or have not participation and funding for certain activities than those who are locally elected. When one looks at local groups, why do one put certain labels on those who mention "environmental" in their name? What about other organizations, unions, whatever, that would participate? I think you should avoid any discrimination there. I think the issue that is on the table in Sweden is: "How do we deal with the national level?" I would argue that we have solved the local level.

As regards "acceptance", we are trying to avoid any discussion here in Oskarshamn on this word. Acceptance implies that you have an answer that you now want certain people to accept. I think rejection is also fine, it is a possible outcome. You cannot reject the problem of nuclear waste. That you have to accept because it is already there, but you can reject certain step that is taken, that a certain site is included, that a certain method is used.

I do not like the word acceptance. We are not here to accept only, we are here to accept or reject whatever is put on the table at a certain time, and we can reject that we should take a certain step at a certain time. For example, going to siting investigations, because we lack information, so there is complementary work needed. Then maybe we can take that step later.

MR. LARS-PETER HALLSTRAND

I just wanted to respond to you there. Harald, we do not discriminate anyone. As you see, the only groups you have are SOS-Tierp and another smaller group. These are the only two groups that have been active in this and to a certain extent have been supported financially for their activities, but it could just as well have been any organization that got involved in this.

We have not named them or categorized them in any way. They could be pro, or they could be anti, and they have all the possibility to apply for funds. The municipality of course knows best about the group's work than the municipality interest groups and special interest groups. Of course that is true, but this is a very sensitive issue. I think that someone else on the national level should make a decision on how much money should be provided to local groups and to which groups this money should go.

MR. KJELL ANDERSSON

I would like to go back to this issue about information or propaganda. I guess you can argue between you about that. Of course there is a sort of objective criteria to evaluate what is information and what is propaganda. But I think it comes down to the overall decision-making process that must be strong enough and that must have the capacity to evaluate the arguments of SKB so that it is made possible for the municipality decision makers and the ordinary citizens to do that evaluation.

As an ordinary citizen, I would also see other actors on the scene, not just SKB. For instance, we see environmental organizations and different opponent groups, and they have also arguments. I think that if one takes that principle that all arguments shall be tested, should they be based on facts or values or whatever, then SKB needs to be tested.

MS. SAÏDA ENGSTROM

Just a short comment, I think more for our international guests who are not familiar with how these meetings take place. Actually when we are talking about SKB meeting people, in 90% of these meetings SKB is there, the Swedish Nuclear Power Inspectorate is there, the Swedish Radiation Protection Institute is there. We were many times in meetings where I have talked and Jenny Lundström or her friends came and put their criticism on the table before the same people; all of you have been around also, with dozens of these meetings. It is really very hard to stand there and have some propaganda machine going there with so many people on the first bench, the regulators, the national, the government. I think you would not do that, and we would like to have the credit for being a little bit more intelligent than that.

MS. JENNY LUNDSTRÖM

The reason that SOS-Tierp has been present among many activities that SKB carried out is that we have put a lot of personal effort in it. We got money from the municipality after having established a position in the municipality. You can not demand this. You have to have the structures that are guaranteeing that you have the arena. I mean Tierp is an exception in Sweden and you have to pose the question: Why is it like that?

MS. ANNA LITTLEBOY

I am Anna Littleboy from Nirex in the U.K. I have just been quite interested in the discussion about siting criteria and participation in developing siting criteria. Obviously I am sitting here representing a country that actually has an opportunity to perhaps think about the process of siting from the beginning.

My understanding of the process that has been going through in Sweden is that in fact there is a technical concept on the table which has safety at its heart, and there has been a process of looking at areas of Sweden which will complement that technical concept in terms of providing adequate levels of safety. Then there has been a process of thinking about where are these sites and where is there a chance of getting a public acceptability for undertaking feasibility studies to look at whether this potential is actually going to be met.

Now that is my understanding of the process. Obviously I work within the industry, so much of my information has come from within the industry. It seems to me that there is a challenge coming. It seems to me that there is a perception that this process is in some way a SKB process. My understanding is also that other authorities have been involved as well through the publication of the research reports.

What I do not understand is, before names are put on the sheets of paper, how is local involvement going to be encouraged in developing some of these siting criteria. I have no idea how you do that and I was wondering if representatives of all the groups on the panel could offer a comment on that, because we have a chance to try and achieve that in the U.K., and it would be very valuable for us to have an understanding of how you get local people involved before you have local names on a piece of paper.

MS. IRIS HAWKINS

The UK government has recently consulted interested parties on the storage of low level waste. We have commented. We have had the Western Islands comment with us, and also KIMO (Kommunenenes Internasjonale Miljøorganisasjon). At the moment, the government has done a bit of a cop-out and say that they are leaving the nuclear industry to pursue the waste question. So we do not know exactly where that is going. But we do feel that the Government in the UK is probably going to develop more nuclear installations. But to do with the process, listening to Jenny Lundstrom, it reminds me of the position in Scotland where the government body dealing with the conservation of nature has no wider remit. That government body only deals with scientific criteria. If the population wants to comment, they have to understand all the scientific names, for example, of seaweeds, etc., before they can even begin to go into the process. The government body, which is called Scottish Natural Heritage, say they cannot take account of social or economic criteria. The only criteria they listen to are scientific. And I think in a way what you are saying is the same idea. You have done a process, but where does the process start? It starts half way down the road.

And I think you are really fortunate in Sweden to have people here willing to stand up and be counted - to put their heads above the parapet - which may have the effect of making them unpopular. I think that they are doing a great job.

MS. LORRAINE MANN

On the issue of funding there are actually two strands we need to look at here. One is enabling people to become involved, and I referred to that yesterday. But the other strand is making available as much diversity of view as possible so that the public are not simply getting the view of organizations that have a lot of money to spend on explaining their case. It is important when it comes to groups that are in favour of the SKB proposals or unions, or whatever. They should obviously be funded to participate in the process, but if it is the same as the information SKB would give, if they are simply saying: "Yes, we think this is a really good idea", then that is not new information that the public are otherwise getting.

It is important that in addition to funding people to participate, there is quite clear identifiable funding made available for alternative views to be put forward to the public and to be fed into the decision-making process. And I applaud your council for having done that because there are very, very few local authorities. Scotland local authorities wouldn't do that even if they could, and in fact they are mostly prohibited by law from doing anything like that.

MS. SAÏDA ENGSTROM

We will try to sum up a few questions. I would like to go back to Anna' Littleboy's question or remark. I am not sure, Anna, I would label the siting criteria or the siting process SKB process.

There is the fund procedure taking place where we put forward not only the technical research and what we would like to bring about and other issues, but also what kind of siting programme we would like to have and how to carry it out and why. It would be SKB process if it would just decide it and it went out there and executed it. But it has been presented in the FAD and reviewed by SKI. Lots of organizations also got that for review. True, democratic procedures were established.

I think basically the ways the laws and the regulations are working in Sweden are accepted. If you do accept that the producer takes place of its waste, then you have the situation as it is in Sweden. We are not in a position of choosing. We have to put forward proposals about the technology, the siting, everything to solve the nuclear waste issue, and we put it forward to everybody's scrutiny, and this is what happens.

So it starts always as an SKB proposal, SKB idea, and it has to be if you accept how laws are working in Sweden. And by the procedures agreed upon by all stakeholders, the former stakeholders, you wind up with a process that everybody is agreeing upon, and I would say that the siting process, the criteria as they are developing, is not as it is today an SKB product solo.

MS. JENNY LUNDSTRÖM

The proposal with feasibility studies was a product of the 1992 FUD (RD&D) Program. It was criticised by the authorities, but I am quite disappointed concerning how the authorities handled this question. In 1993 when they had the Dialogue project they did not really take a fight with SKB to defend the conclusions made in the Dialogue project.

But your question was on how to involve local people, how to get this activity before the siting places are named. I think that is really crucial and that is one of the really big difficulties in the nuclear waste issue. That is why I think we need to design a siting process like in Germany even if I do not really know so much about the German process. I would like to see some sort of committee where people can be involved if they want to. I do not think so many are going to be involved in the first step because most stakeholders are not identified at that stage. Instead, scientists will be overrepresented. The outcome would be a map with a lot of possibilities, and that map should be made public. And when that map is being made public, then you will get the public involvement that is needed to be able to develop the details on the selection criteria used in the further process.

Also in the meantime, you should start the discussion about the method. The method should not be there beforehand. You also have to have the public involvement in discussing the method and the values and ethical principle the method should meet up with. I think that is very important. We first have to make a map with many places: it can be here, here and here and here. Without a map, you will not get a broad public debate and involvement.

MR. LARS-PETER HALLSTRAND

How do you get in a very difficult issue like this? Well, it is not easy. I suppose in Oskarshamn you have had as far as ten to work with this issue. In Tierp we started in 1999. In Oskarshamn you started already in 1996. It has many times been a problem not having a lot of places. But if we look at the effects and the results in the society, it was actually an advantage. There was constantly something happening in our municipality with at least two or three newspaper articles about this. And that has been an advantage.

I think I have been disappointed many times that I have not seen more people getting involved. But if you look at other important issues that happened around the society, how many people get involved there? So I still think that we have succeeded fairly well in involving people in this. Nothing is so good that it can not be better especially in this nuclear waste issue. But in spite of all this, we have seen fairly broad response or fairly comprehensive response from the inhabitants of the municipality.

Now I would like to comment about the propaganda issue here. This is a process that stretches over a number of years. Anyone that tries to propagate propaganda, so to say, will not succeed and will not bear up any close scrutiny. You may get away with propaganda during a short period of time, but not during a period of several years. We carried out some research last year with some of the travellers that went with us down here to Oskarshamn. I think there were 560 of them, and we got back about 480 response. It was an internal test to say how good our activities were and what people thought of them.

Among other things, we included that question: How did they perceive the information they had received? One out of 480 people that filled in the questionnaire had a different opinion, but most of them found that it was well-balanced information, far away from any propagandist experiments.

MR. TORSTEN CARLSSON

I have a question to Jenny Lundström and then I have a few comments. Jenny is talking about what she would like to put forward, which should be the ideal model according to her. That is what they applied in Canada as far as I remember, and they did not succeed with that model very well.

In addition, every municipality has to be given the opportunity to decide what is its particular advantages in this work. No matter what kinds of issues are being discussed, if you are on a central level, you are staying on a government level. If they were to decide which model should be applied for the local work in any political issue, I think the municipalities would be hard pressed to accept that. Of course you can present models as part of the ongoing process.

We, together with Olof Holmstrand, Kjell Andersson and also Olof Söderberg partook in the dialogue

project in the beginning of the 90s. As far as I recall, the people that represented the environmental movement at that time were not prepared to sign that report. They had reservations about many things in that report. What we have done in Oskarshamn is trying to apply much of what resulted from the dialogue project and used that as a basis for our work. I do not believe in having a centrally controlled part when it comes to local issues like these.

In addition, you have to remember that SKB is by law charged with presenting suggestions on how to deal with the nuclear waste. And we have to respond to that, whether we think that is good or not. And we do that in collaboration with our inhabitants, and with local authorities. We do that together and we come up with the model that we feel suits us. And we have come up with that model, developed that model in collaboration with both the authorities and the industry, but above all, together with our local inhabitants.

My question to you, Jenny, is: Do you feel then that directives should direct us on how we should work, or should we develop these methods ourselves?

MS. JENNY LUNDSTRÖM

Thank you for that question because I understand that I have been unclear. What I am talking about is how we should get an involvement for the local level before things are decided. I know that you are content with your possibility to reject or accept from Oskarshamn's point of view. But I mean that we need a national debate on the nuclear waste and we have to have a local involvement in that process. And we have to create a local involvement in more than a few municipalities, because only two or three municipalities will never be able to raise the debate to the national level.

At the local level we all have problems with the national politicians that do not care about this question because they do not need to care, because we take care of it. But should we do it in this way if we really want to reach long-term security? Is it the right way? If we never pose that question at the local level because in some way we feel trapped in the already existing structure, we will never discuss how we would like to design it if this would be an open white paper. And it is that discussion I want to reach, and I want to have the municipalities and the national level involved in that discussion.

And I do not know what the outcome will be, but I trust that if we have a fair process, the outcome will be some sort of a common will, the best according to the common will of some diffuse democratic viewpoint. My presentation is a little bit diffuse because my point is that we should not have locked everything up from the beginning.

MR. TORSTEN CARLSSON

Just a comment there. For us, the safety issues have been the main concern. Nothing has been more important than fully understanding the security and safety issues. We have also been very clear in telling everyone who we feel to be the specialists and the experts. And we feel that within the nation's borders, we have our authorities that are there to review what the industry does, and we have said that we cannot see there are any others that we would trust more in that work that they are actually charged with.

You have to do these things in certain order, and we feel that that is a very good idea to have our national authorities, working as our experts. We felt that there has been a vital point to do in the whole process and the system that we have implemented, together with our inhabitants. What I can not see here is who should be responsible at the national level for working like that. Should it be SOS-Tierp, should it be someone else? Who should have the full responsibility at national level?

MR. PATRICK FAUCHON

We have talked enough of various stages of local and national participation of various actors. My question is for the people of Tierp: are there members of the government that have taken part directly in the debate or the dialogue at the local level?

MR. OLOV HOLMSTRAND

Unfortunately, I have to answer that we have not seen very much of that at all. We have had one member of parliament who comes from the area, who has been there a couple of times. We have invited members of parliament to many of our activities, primarily the members of parliament from the county, but we have seen very little response from them.

MS. SAÏDA ENGSTROM

Of course the regional MPs are more interested on the issue when their communities are involved. They showed up every now and then, but I would not say it is a big crowd .

MS. JENNY LUNDSTRÖM

The waste network had a half day presentation at the national parliament two years ago on the nuclear waste question from the local group perspective. Out of 349 parliamentarians, there were about 15 attending the meeting. Yes, 15. I am not that surprised because the process is so designed now that you manage without the national interest, without the interest from the national politicians. I think this is the responsibility for SKB and the authorities to create a process that demands an engagement from all level, not only a few municipalities. This is a responsibility that the authorities, together with SKB, should take.

MR. GILBERT EGGERMONT

My name is Gilbert Eggermont. I am a professor at the University of Brussels and involved in local research in Mol, Belgium where I tried to integrate social sciences. I can tell you I am surprised by some statements yesterday and today.

In Belgium, we have done as what Tierp is proposing. We have made a list of 90 sites in about 50 communities all over the country, and it was a mistake, it was a failure because we had manifestations on the whole country refusing a priori the whole thing. That was based on exclusion criteria and on different development criteria with different universities in a process within the act.

We looked at Sweden afterwards because Sweden was a member of the evaluation commission of all the nuclear waste programmes in Europe in the framework programme of the last five years. I visited places here and elsewhere in Europe. And I can say what I have seen is that the developments of SKB are one of the best developments in Europe. It is robust engineering. SKB spent more than two times the money of the other waste companies in Europe, like in my country. You have a stable geology and you developed a dialogue, integrating ethics criteria.

The rest of Europe is looking at what you were doing, the way dialogue was developed on a solid system. When I hear the tone of the discussions here yesterday and today I am rather surprised. I can agree on one point and maybe that is for COWAM an interesting thing, that we have to discuss the democratic way of the process of dialogue. Maybe the opinion is too much controlled in my country. It is too much control steered by the waste manager. We have to think it over in COWAM and look for better ways of organizing it. But there are a lot of arguments not at the Swedish level, but at the European level, when I compare what is being done here and elsewhere.

MS. MONIQUE SENE

I am a bit surprised of everything that has been said here. It is true that Sweden to us was always a model. On the one side the nuclear power in Sweden was evaluated on a broad basis. You now have a moratorium and you are only concerned with waste. But obviously when we listen to you, we understand that the waste are only partially taken care of : questions of future generations, questions about what will be done with the waste later on are put aside or are discussed from a technical viewpoint. This is one way of proceeding. The national level does not seem to be interested in it any more, because finally it is going to be solved by the industry, by the regulators. So it is something that is not working any more : the local level is forced to take the question in charge, it is forced to examine it, but on top the

national level is no more concerned, it does not seem that what is going on at the local level loops back on top.

Having said this, in France, we have decided on a programme to take charge of the waste. We have tried to put all the cards on the table. It has not been a very conclusive experience. Why? Because the way to define dialogue procedures where the population can make an issue its own, this way takes longer than five minutes. I was surprised that the information on the project was given to Tierp in february and the answer was to be given in november. There is no enough time for a genuine analysis. It's too short. The process is a long one. It needs mediators, and these are extremely difficult to find. Perhaps in Belgium you can do it through universities, but I am not sure that that is enough. Mediators should also be people in the population who understand the file and explain it with their own words. I think there is a big problem of dialogue. Dialogue means that everybody can ask questions, that there should be answers, that these answers are analyzed and that all this eventually changes the project. I do not see that this is being done. Thank you.

MS. SAÏDA ENGSTROM

Mr Eggermont and you said Sweden is regarded upon us as some kind of good model in getting the question further with the dialogue and with the development of the technologies. We would like to believe this is the case, at least as regards what we are doing on the point of the dialogue with the people. We all hear our experts in our areas. I would have liked to have some of these people we all feel very much warmth for, and have you listen to what their questions are.

When you are out there in the communities day in and day out - and we are doing that - you know what are the questions, you know what people would like to do, you know what their fears are, and we listen; we talk a lot, we listen a lot. I agree with you totally this issue is not a one-day flirt, it is a courting mission toward maybe marriage some day, and we are really trying to do that. I think one should be given the benefit of trying very hard to do that. For instance, by meeting the people after giving them information and room to review the reports,.

I think you would hear that the criticism and the questions they have are not always what the experts label as the difficulties, and what we have learned. We have learned it the hard way, but we are learning it and we are learning it everyday.

We are addressing the questions that are very important for the layman, the lay person in the communities. This is our mission. This is something we can choose to do or not to do, we have to do it, and do it the right way. If we do not do it the right way, Madame, I think we will not be succeeding in siting a final repository that has the tolerance of a community. It is as simple as that.

MS. JENNY LUNDSTRÖM

I think when you had that situation in Belgium with a lot of angry people, then you had the real starting point for getting a real dialogue where you allow people to influence in the forthcoming process. Of course such situation is difficult to handle in the beginning, but it could have been the beginning, even though you did not interpret it in that way as you did not continue. Unfortunately, in the short run it is much easier to do it in the Swedish way.

MR. ERLAND OLSSON

As an inhabitant of Tierp and as an individual that has to make a decision in the future whether this process is sufficient or not insufficient, when it comes to accepting a repository in the municipality, I am really happy that we have opposite views in this issue, that we have a good opposition. We have to understand that whoever sits on 8,000 tons of nuclear waste in its lab will be criticized. And if that was not the case, if we did not have the discussion around the principles for repositories I would be very concerned. It is a right method on how we can work and develop this process, and we have to have the guts to discuss all the issues.

I do not think that all 8 million Swedes will agree on how this process should look like, but I do hope that the majority of the people in this country can feel safe enough and not live with the apprehension that this may be a big method.

MR. TORSTEN CARLSSON

A short comment of what Jenny said about the land owners. I think it is incredibly important that we are trying to stick to the facts as far as possible. It is incorrect that the land owners had no knowledge about what was going on their land, but they had not received answers to questions that they had posed to SKB in the way they wanted. That is a huge difference between that and not knowing anything about what is going on.

Working groups Report

Working group 1

BY MR. THIERRY SCHNEIDER

The first working group was composed of 12 persons with a large bunch of representation. It was focused on local communities, NGOs and expert groups, and we had the chance to have a large number of countries: Belgium, France, Germany, Sweden, Switzerland and U.K.

We had a lot of discussion on national experiences, but I will not reflect all these elements now. We have decided to present to you some key elements. We started to make a list of what we called the "fundamentals", which should be the basic requirement for the decision-making process. Of course it is a quite general work. Beside we have to refine all these elements, but it reflects the state of reflection in the working group.

"Fundamentals"

The first element for basic requirement should be to have a **democratic process**. This seems to be obvious, but we start then to put some words to specify what it means : it needs to be transparent and to have participation. What does participation mean? It is mainly that all voices have to be heard. This implies talking to people and involving people.

Then there is also a need for **information**. This means clear and understandable information. We have to share this information. We have also seen in the different presentations that there is a need to get some well-elaborated information : it should not only be some information for the purpose of communication towards lay people, but you need to have sufficient information, clear information. You need to be in a position to analyze this information and to have a possibility to react on this information. For this purpose, we consider that it is quite important for people to be trained in order that they will be in a position to have a grip on the situation.

Then we pointed one element which was already widely mentioned during the previous session, which was the problem of **fundings**. It has to be further discussed.

The issue of **independence** also has to be discussed. The independence, for example in some countries relies on the fact that there is a local liaison committee. When the members of this committee are nominated by the operators, it is of course quite difficult to work. So there is a clear necessity to have independence in the local participation.

The last point relates to **legitimacy**. As soon as the questions are credible, all the questions are legitimate : you are in a position to engage a clear dialogue and to have a good democracy.

To continue on this topic, we concluded that the dialogue needs to be a fair dialogue and not only a transfer of information. The dialogue needs to be associated with **influence on the outcome**.

You also need to have an **agreement on the safety principles** in order to know where you have to go. It does not mean that the safety principles have not to be discussed within the process, but you need to know some first rules in advance.

Then, as we have seen in the presentations, you need **time**. You need time to run the process and to be in a position to make your own view.

Another "fundamental" is the question of **veto**. You need to be in a position to get out of the process. This veto principle should be a sort of validation of the process. It was also mentioned in the group that one should not misuse this veto. That means that, for example, it is not to be used in order to postpone any discussion on this topic.

Last "fundamental" : you need to have a **local and national debate** to involve both levels together. The starting point for this debate should be the waste management strategy.

The decision-making process

We try to put a few elements to specify the decision-making process, but we were really at the first stage of this reflection.

The first element is to have a **step-wise process** with benchmarks involving the different stakeholders and a schedule to know where we are going to, even if, once again, you can discuss and adapt the schedule once you are in the process. But you need to know beforehand where you are going to and at which time you will be at the next meeting point and which kind of decision has to be made.

Second, we have to **establish the rules in advance**. Once again, the rules can be discussed, but you need to know what question is being discussed and which kind of criteria will be used for the evaluation of the decision.

Then we put once again the question of **veto** which has to be implemented and to be decided. What does a veto mean? It should be different according to national contexts, we consider.

The last element is the **involvement of national and local levels** : the responsibility each actor will have in the process should be clearly defined. For this purpose, we realized that it will be quite difficult to have a unique framework for the decision-making process. You cannot say that this would be a good decision-making process. You have to adapt yourself to the situation. You should have some general line, but then you need to adapt the process according to the national context.

Proposals for the next step

We make a few proposals for the next step in COWAM. It does not reflect all the possibilities, but a few questions. The main question is : **how to integrate local and regional levels in the debate on sitting in the early stages of the process ?**

The second proposal is to **refine the fundamentals and the decision-making process** which were pointed out during the working group.

Working group 2

BY MR. LARS-PETER HALLSTRAND

There were nine people in the group. Sweden, France, Belgium, and United Kingdom were represented.

We reached the following conclusions. We were looking at the bullet list that we received and the material. We looked at the elements of decision-making process which are critical, the elements we found positive in each case study.

When looking at **Sellafield**, we reacted towards the **secrecy** when the operator looked into the different communities, discussing whether they should place the site.

We also discussed the fact that they were trying to **buy acceptance**. That could be interpreted as something that is dangerous : "If they say it is so harmless, why would they have to buy the acceptance ?".

On the positive side, Sellafield is a **change of attitude**. The community was let influence the continued work. Now we felt that they needed a change of attitude in the process because they did not get the applications approved in the Sellafield plant.

As regards the Oskarshamn case study, we can see here there is a **high level of competence and knowledge** in Oskarshamn. The **democratic process** was good. The negative side was a **lack of opposition** in Oskarshamn, and sometimes from the neighbouring municipalities. Moreover, the regional collaboration had room for improvement.

As regards the Tierp case study, one positive aspect was the **collaboration with the opposition**. The **regional collaboration within the district** was also felt very positive. We also found that they have a very small, but at the same time very **flexible organization**. On the negative side, we noted a fairly **limited political commitment**. We mean that we do not really have the municipality council behind us very often. Of course there are both pros and cons to that. Those of us who work with this everyday see it as a disadvantage. But if we look at the experiences from Måla, for example, the council had invested too much in this. When they decided to withdraw, the members of the Council felt that they lost a lot. I would say that there are no such risks at all in Tierp, considering the low commitment of the municipality council.

Let's have a look at the second question : *Do you consider the decision-making process in each case satisfactory or not, and why?*

		Sellafield	Oskarshamn	Tierp
1	Possibilities to influence The decision-making process	-	+	+
2	The regulator, the rules and the policies For the decision-making process	-	+	+
3	Role of the municipality in relation to the national policy	-	+	-
4	Early/late involvement of the municipality	Late	Early	Early
5	Financial resources	-	+	+
6	Access to experts	?	Yes	Yes
7	Local compensation or remuneration After the decision has been made	+	?	?
8	Number of people involved locally	?	40	25
9	Internal dialogue procedures in the municipality	No formal procedures	Formal procedures	Formal procedures
10	Conditions for discussion	Min	+/-	+/-

11	Role of the nuclear industry	-	-	-
12	Role of the governmental authorities	-	+	+
13	Independent researches	+	-	-
14	Quality of the dialogue	?	+	- → +
15	Expectations or results of the decision-making process	?	+	+
16	Transparency and clarity All through the decision-making process, according to the local players involved	-	+	+/-

Here are some additional comments.

As regards the body of rules, the policy, which make the decision-making a democratic process (2), we felt that we had never had that in Sellafield. We have decided we will have one in Oskarshamn. In Tierp, we may not have an actual formal body of rules either.

When it comes to the role of the municipality in relation to the national policy (3), we see that the municipalities can be involved early or late in the process. It was fairly late in Sellafield, we felt, but fairly early both in Oskarshamn and in Tierp. And in the case of Oskarshamn, it was very early.

Concerning the access to experts (6), we do not really have a view about that in Sellafield, and we can not really come to a conclusion. But in Oskarshamn and in Tierp, we felt that they had regular and very good access to it.

When it comes to local compensation or remuneration after the decision has been made about the site (7), that question has never come up in Sweden so far. That will come at a later stage. But apparently in Sellafield, there was some type of remuneration for the local inhabitants.

If we question internal dialogue procedures in the municipality (9), there were no formal procedures in Sellafield, but that procedures had been formalized both in Oskarshamn and for Tierp. Of course there are both pros and cons when it comes to that.

As regards the role of power industry (11) it was considered more or less non-existent in all municipalities. As far as governmental authorities (12) are concerned, it is doubtful that they played a role in Sellafield, whereas they had a fairly large influence both in Oskarshamn and Tierp.

There are definitely far more independent researches (13) in the Sellafield case than in Oskarshamn and Tierp. We do not have many available independent researches in Sweden.

When it comes to trust and the quality of dialogue between the different actors (14), we met different categories. In Oskarshamn, it has been fairly good. In Tierp, it is actually on the way up. In Tierp we are far better equal now in dialogue than we were a couple of years ago.

The expectations or the results of the decision-making process (15) are positive in both Oskarshamn and Tierp. When it comes to transparency and clarity all through the decision-making process, according to the local players involved (16), we actually put a minus for Tierp because we feel it has not been of sufficient quality.

The third issue we addressed was the influence on the decision-making process. It is quite different from one country to the other. We have pointed out major differences between UK and Sweden : they relate to **transparency and the public access to information and expertise**, to the **financial support for information, dissemination and knowledge education**. Most of all, the position of the municipalities and the opportunity and possibility for them to influence the process were considered as the major weaknesses of the case in Sellafield compared to the Swedish situation.

Working group 3

BY MRS. MONIQUE SENE

The third working group comprised representatives from Belgium, France and Spain.

We first noted that the United Kingdom has had problems at Sellafield, but finally has restarted the whole proceeding. So it is interesting to see what did not work and what was positive taken out of that failure. Sweden had a different proceeding : a moratorium on nuclear power was decided and Sweden is now confronting the waste problem, but with a kind of a gap between the local level and the national level on this issue.

We discussed a number of problems :

- it seems to us that there is a heavy demand that **the government** should assume its **responsibilities**, particularly in Sweden.
- how to distinguish **information** from **propaganda** ? How do we perceive an information that comes from an operator and how can we balance it out ? We thought that a pluralist approach would help to avoid the perception of propaganda. But that is not very easy. Another option would be a different type of participation from the people involved.
- Thirdly, to be able to define a site, there must be **scientific criteria**, but these cannot be only the operators' criteria. There is a necessity to analyze the whole nature of waste before saying "we go subterranean" or "we do a laboratory". It is perhaps premature to start talking of stocking in underground facilities and it is perhaps time still to put the question again: What should we do? That is on the basis of scientific criteria, but very much under pressure from external interest. Scientific people should not be isolated; they must listen to what they are told and listen to the questions that are put to them.
- For choosing the sites themselves, what we examined was the **pre-selection of sites**. It did not work neither in France, nor in Belgium, nor in Sweden and in the United Kingdom. Should we show our cards because we have chosen such and such a site? We think that the discussion must be much more in-depth. We know that different countries are made of different geological bits, but we have to define the method first. So we have to start again at quite a high level.
- What we have to do - and we are sure of this - is to **define the method**, the limits of consultation in order to have established structures, to elaborate the methodology, how people are going to participate... That is the first thing. Each meeting should not start with a discussion on methodology, it should be established first. Even if you have to change it a bit as you go along.
- Concerning **evaluation and review** : is a consultation good or not good? Have things been done correctly or not? Something very important is the quality of the way national and local authorities are integrated. It must not be of manna from heaven. It hasn't got to be either just a local level that assumes all responsibilities. We have to find equilibrium.
- Now another point is the **financing of voluntary parties**. It is true that if we have to implicate a number of people in these proceedings, they have to be compensated in some ways or another, so they are not completely naked in front of other big organizations or legal entities. So we think it is perfectly normal to pay some sort of compensation to these people.
- We recommend the creation of an **independent commission** to look after these nuclear waste issues. If one exists, let us re-examine the way perhaps it is constituted. It does not mean that operators and political parties are excluded, it just means that they should not be the masters of these commissions. It should be chaired by one or more people that are more or less independent of most institutions. It is simply to increase the plurality of these commissions and then to enable them to gather and to analyse all the documentation and the information in order to establish the debate that is so needed and expected. We have to admit other points of view and bring in people - scientists and other people - to participate. It is something that is very much asked for, and Belgium here has given us a few good ideas.
- So if a **dialogue** has been established with the population, **how do we do it?** Well, accepting to address their questions, but also encouraging the population to express themselves without trying to influence them. We have to bring them to participate, to be able to have a discussion that can be

taken into account in the decision. We have to integrate in the final result what was accepted. In other words, the people participate in this, but they want to see that they have been listened to, that it has not been a waste of time.

- Another difficult point is to achieve **pluralism and quality for counter-expertise** or outside evaluations. One should be able to ask researchers in universities and various research organizations, to do this kind of work, and it shouldn't represent something just added on. This kind of work should be valued in research organisations.
- However, you must not have so many illusions. There is **no single solution**. Each country will be able to benefit from other countries' analyses, but it has to be integrated in its own structures. If something works somewhere, we must not have the illusion that it will work automatically in other countries, and vice versa. But we can bring to each other everything that we have done and see where we have succeeded, where we have failed, and more importantly see why certain things did not work.
- And finally for our group, the problem should be assumed both on a national and a local level, but after having accepted the dialogue, **defined the rules of the game for the debate**, and taking into account the opinions expressed therein.

Working group 4

BY MR. JOHN HETHERINGTON

This Report tries to summarise the discussions in Group 4, while covering the main points coming out of the group. Then it identifies some key conclusions made by the group. Some of these are expressed in terms of issues that we discussed and see essential, rather than necessarily being firm conclusions as to what COWAM should do. Where we feel that that should happen, and there should be things taken forward, we have highlighted those.

Key issues

We began by agreeing the key issues which we think came out from the discussions and from the presentations.

The whole issue of **publication of sites**, the numbers of sites, how many and when that happens has been a central area of debate. There are a number of different views on that, but that is clearly a concern that is there.

The whole issue of **funding** was also acknowledged. There was recognition that there are two components to the funding debate. There is the issue of funding for process and funding for support in a selected community when that becomes appropriate at a later stage.

Concerning the presentations which covered the U.K. approach: from the Nirex perspective there was a general recognition that having gone through a very extended process with many years of investigations, only to find that, for reasons partly of process but also genuine concern about suitability of sites, there is still no effective method of handling the waste problem yet agreed in the UK. We felt that it would be interesting and important to explore how **non-confrontational and participatory approaches** can begin to be applied in that U.K. context.

This led on to a discussion about the Swedish approach. It was clear that some of the international participants here recognised perhaps that what should have been seen as a model nevertheless has got many problems in it, and these were occasionally quite vaguely expressed. We felt that actually that is quite healthy. Certainly Sweden needs to examine the thinking that is happening elsewhere, where programmes have had to step back. It was suggested, in some views, that Sweden perhaps needs to take on board some of those lessons and actually to go back to some of the **debate about methods**, and about the primacy of suitability of site, to avoid perhaps getting in some of the problems that have occurred elsewhere.

Processes cannot be narrowed too soon as the methods of siting and questions will always reoccur. There is a key message there for this process; that we need to keep these issues accessible to people, otherwise problems can start reoccurring. There was a general conclusion that the British process added value and should be seen as positive.

We also considered the **value of the legislative framework** on the process. Our group had a significant component in it with experience of the French approach, and we came back once or twice to the issue of a legislative framework and the importance of it. It is important to provide ownership of the process, national recognition of the process, and to give legitimacy and to set out roles.

And then, there was recognition that providing funding to help the process seemed to be a real conclusion that we could reach. To **help the process locally** was very important. We have, as far as we can see, to recognize that the British position, where there is absolutely no support for local communities, is quite unique. It is a lesson we will want to take back.

A problem was acknowledged in the **lack of national debate continuing**, once local siting discussions were on the way. There was a real concern, we felt, that somehow once you get to the stage that majority of people are no longer involved with siting issues, you can actually lose the national interest, including the national interest of senior politicians and government departments, if we are not careful. That is something that needs to be built in and managed into the process.

We had an interesting discussion on both the **good and the bad aspects of veto**. There was some concern that the issue of the veto reduces the sense that actually there is a real choice being made for a good candidate site. The process seems to be driven just by chance, rather than by a real positive driver

towards safety. Again, we mentioned that in the U.K. there is no context for veto.

Moving on to the second session, we discussed the value of **funding opposition**, noting the examples of Oskarshamn where perhaps there was not a strong opposition group. We compared it with the Tierp situation we talked about today, where there is support from the community for groups that are concerned.

There was concern raised about the SKB role and issues that are not felt to be on the table. In other words, there is a problem for the supporter or the developer of a proposal, not actually always having that degree of **trust that all the issues that people feel are important to discuss are there**. We felt that should be facilitated.

But again, we felt that **the depth of involvement of Swedish municipalities** was a very good example that we can follow elsewhere in Europe. There was, following on that theme, the recognition of the French participants that Sweden seems to engage its local population well. And maybe we could look to lessons for how that is being done, in particularly the Tierp situation where the population is being reached and contacted in a wide range of ways.

The view was expressed that **the operator should not be solely responsible for the process**. All these things were about trust and openness. There was a feeling that there needs to be, in a community, a real engagement between the developer the community. That is actually about how the whole process is conducted, and that is again a lesson: to have representatives of **local governments and communities steering the local dialogue** process. **Technical competence in the community** was also seen as important and vital, with funding available for that.

There were views that Sweden may be heading for the UK situation if there are concerns about siting and safety

We talked also about the discussion of **alternative methods** : can they be considered in Sweden ? There was some clarification that followed, that deep bored holes had been looked at as a theoretical thing, but were now being pursued.

There was welcome again for the funding for the concerned local groups, such as SOS-Tierp in the Tierp situation. There was a general agreement that is absolutely vital that there is **no suppression or avoidance of conflict**.

We then got into a slightly more philosophical discussion on **propaganda versus information**. Support for funding was the way we saw a resolution of that, in terms of parallel studies on technical issues. Although the developer has got all the access to resources to carry out the work, it was felt that at times it would be very important and helpful to have **additional experts**, whether through the local authorities or something jointly done by the authorities together with a sort of steering group. We actually concluded that we thought it was important that COWAM make some recommendations on funding for all participants, and we also noted that perhaps there was a need for a **diversity of funding sources**.

Conclusions

The chairman of our group drew out three key points. Concerning the differences between Sweden and the UK, the point was made that the legal framework to underpin the process was really a positive point that both Sweden and the U.K. should look at. We had a very interesting point coming from a British background about legalism. It is a necessity to have law, but it is not enough, it has got to be a living way of supporting the processes. **Law must create space for debates on a daily basis**.

The other key thing that we recognise is that all this is made very difficult by the incredibly long time scales that we are all dealing with. We have all recognized that **time and step-wise processes are needed**. It is therefore important to constantly provide stock takes both at the local level and at the national level with **regular oversight of the siting process**.

Our view on the issue of **veto** is that it is a **delicate balancing act in terms of national and local democracy**. How does a veto benefit simply places? Clearly it benefits the community that is considering being a potential repository host. But in that process, who does it defect to or not? and where is the equity in that? It must be by **publication of sites but validated by a panel experts**. We need to take a long view.

Working group 5

BY MR. KJELL ANDERSSON AND MRS ANA YUNCAL OLEA

The **major concern** was that in quite many countries, the decisions are still made at the highest level and that the local level involvement comes, for the best, later. The communities must put pressure on government and waste organizations to achieve this involvement, and there are really promising examples of that.

For instance, in Spain, where the operator was looking for an intermediate storage site, without informing at all the public, the communities now have their own resources and they are really putting pressure and getting informed and involved.

On the decision-making process :

- we had some concerns with the British enquiry as it had been done. It is built up in an adversary situation between the different actors. There was no regulator involvement which we think is necessary for us in the process.
- The NGOs should be treated as a resource and not be seen as a problem in the decision-making process, because they help to clarify the issues by asking new difficult questions to the implementer and to the regulators.

We also took the **European perspective**.

There was, for some members of the group, a real concern about the nuclear safety competence in Europe. It is decreasing because reactors are shut down and no new ones are being built. People from the local communities expressed concerns about the future of nuclear safety because of this. That is a little bit outside the scope we are really talking about here, but it was important for the communities.

In the ordinary process, it is important to consider that this is not just a technical matter, it also has to do with political, economic and social issues, and it is important to bring in social sciences into the processes. The communities must have financial resources during the entire decision-making process in each country of course, but also on the European Union level, in order to be active in Brussels.

We have the situation that each country takes the position that it takes care of its own waste, but no one other's waste. There are some countries that do have problems with that. This problem is remaining under the surface, so to speak. On the other hand, this cannot come up in countries like Sweden and Finland because if this is discussed seriously, it will stop the entire process.

List of issues

- the capacity of the local actors increases with participation in the decision-making process
- the regulatory framework: we observed that the framework for Environmental Impact Assessment on the European level but also on the national level is generic. Maybe it is not really designed for products like the nuclear waste management projects because, for instance, the EIA has gone along for a long time. So EIA does not always fit in that respect.
- The role of the local communities in the national nuclear waste management has also been discussed. Yes, it is possible for the communities to have impact as we have seen, for instance, in Sweden. It has become late, but at least now the implementers do face the issue.
- Resources for local actors must also be looked at. Yes, there are resources now in most of the countries for the local communities, for the working budget. In some countries, there are also resources for what has perhaps been called compensation. If there are no resources given to the local communities, that is a very strong argument for them to get resources. Because if they do not get the resources, then they cannot make the decisions, and the programmes get delayed.
- Access to local actors to expertise is a key point as well. Sometimes there is a problem to get independent experts, but maybe there is a tendency to ignore the existence of experts in the communities. We have to recognize this point, and I think there are plenty of good examples of that.
- Regarding the opinion and reliability of the experts, it is difficult when the different experts disagree, but sometimes the experts play different roles. They expose themselves maybe as experts not in their real fields of expertise. So they have the responsibility to clarify their role.

- Compensation was another question. In some countries, they do have compensation. In other countries, like in Sweden, there is no such a system. And I do not think either that we want to. We do not like that terminology.
- The number of people involved in the processes : it seems that 50 to 100 persons in the different communities endorse that role, if we mean by "involved" people not just being informed, but also actually even actively involved in doing something in the process.
- The procedures for dialogue should not be decided in detail by government. Every community must work out its own decision-making process. We thought it was important.
- To influence the technical concepts from the communities is possible, and it is also of course possible to discuss technical matters and thereby have an influence on a technical solution. Sometimes experts are reluctant to present their assessment because they feel unsafe when they leave their room for analysis and go to the communities.
- Role of operators. We should have a bottom-up approach for information. There should be a broadened approach here, so that it is not just having information material and taking care of the concerns expressed in the local communities. Operators should live in the local area.
- Role of regulators. There is an imbalance of resources between the operators and regulators. They are important with regard to the economic structures and the development which we see now. It is important to guard safety with respect to economical structures.
- Independent experts. They are important, but also they might have their own agenda, so they all have to be evaluated.
- Then we noted that words like transparency, openness and dialogue are always used here and they are very nice words, but we need to have a methodology and structure for actually develop what we mean by them and to do something about it. It seems here also there is a link between the COWAM project and the RISCUM project.



Bottom-up approach

Information	→	Referendum
Transparency/openness/Dialogue	→	Consultations
Participation	→	Hearings
Capacity to accept or reject	→	Risk Management Assessment

Finally, to resume in a way all the things we have been going through we ended up with this table with the local communities in the small circle and at a lower level, then the national and the international levels. We considered a lot of organizations, most of them are from a political, social and economical perspective. We made a broadened approach from our local level to the international level, thinking about information, transparency, participation and to the capacity to accept or reject.

Working group 6

BY MRS. ANIKA SJÖLANDER

Our group contained of members from Sweden, United Kingdom, Belgium, Finland, Germany and Japan. I want to stress that this presentation is an attempt to summarize the discussion.

My presentation will concentrate on questions and criteria.

- First of all, the need to **contextualize the decision-making process** could be the main conclusion of the discussion in our group. The understanding of what is a good decision-making process differs between countries and municipalities. Therefore there exist no "one and only" solution or formula.
- We also identified a need for **clear definitions of different actors, their roles and responsibilities** in the decision-making context. We have some questions in relation to this that I will come back to in the end.
- Related to that, there is a need to **clarify the process**, and to clarify what we are going to decide. As we have seen from the various case studies, what is at stake differs between countries.
- Another direction for the decision-making process in our group discussion is that it is good to **use established structures when it is possible**, and to take decisions within the normal, regular communities or municipalities. And if it is needed, ad hoc solutions can be developed too.
- Concerning the **regulators**, requirements for their **participation in the process** was expressed.
- As the other groups, we were also talking about **openness, transparency and dialogue**, and as all the other members of this audience, there was no one that argued against it. But the question remains: How to achieve it?. We said that maybe a good way to do it is to have **multiple approaches to reach the citizens**. We also emphasized that there is a need to have **resources**, maybe not only economic, but also other type of resources like for example child care if people are to be able to participate in meetings and so on.

We also had a list of questions for further discussions.

- The first set of questions is about framing, **who sets up the national decision-making process**: and who implement? Is it the same actor/s? In the cases that have been discussed here, it many times contains a relationship between the industry and agencies.
- Another question was about the **possibilities to influence the process**. This question is related to the issue of dialogue and transparency, and that also needs to be dealt with further on.
- Concerning **the level of voluntarism**, it is a question of balance. The Swedish case represent a systematic approach: all the country has been reviewed and all municipalities have volunteered. This is a question that needs to be discussed more.
- As I mentioned before, what are we taking decisions about : **yes or no to what** ? Is it about the amount of spent nuclear fuel, is it about nuclear waste from certain reactors or perhaps about foreign waste?
- Another thing that needs to be reflected upon is the **relation between the method issue and the site issue**. When are we taking decisions about the method in relation to the siting and localization process? Someone asked: Do we have enough generic understanding to make a decision, to select?
- Concerning the **compensation issue** for the municipalities, we said : "Safety first". But one should remember that things differ much between countries regarding the compensation issue.

Working group 7

BY MS. JENNY LUNDSTRÖM

We were about 11 or 12, representing four different countries: Sweden, Great Britain, Germany and Belgium. We had a really nice and good discussion, but that also made it a little bit tricky to compile the notes and to make a report.

What I am going to present here is the conclusions where we had a lot of consensus, and also what we would like to put as an advice to the further COWAM work.

- As a starting point, we think that a **blank paper** is a prerequisite, as in Germany and the U.K. We do not know whether it will work, but it is a good starting point.
- Anyhow, all of us considered **safety** to be the **most important question**.
- The crucial thing is **how to involve a lot of people and the local citizens** early in the process when you only have a blank paper. We did not have any really good answers on it. But it has to be addressed, it has to be quite a bit of work done on it.
- As was mentioned by the former group here, the **issue of siting is linked to the national policy** concerning many issues. Indeed, you can not separate these questions, as well as for the choice of methods. They are linked and have to be dealt with together.
- In this blank paper process, all questions have to be addressed, and we raised some that we felt were quite important :
 - ⇒ The question about **compensation**. Our discussions related not only to compensation to land owners, but also to the municipalities and regions. We looked at compensation in a broad perspective, not only in monetary terms but also, and maybe more important, as regional development plans.
 - ⇒ The question of **co-siting**: when you discuss the repository for low level waste, you also have to address the questions: Will this also become a repository for the high level waste further on? Will a repository for a high level waste also be linked to a repository of low level, middle level waste? Even if you can not answer all those questions today, they have to be addressed.
 - ⇒ The question of **multi-national repository**: as it might be difficult for the smaller countries to make their own national repositories.
 - ⇒ We had different views concerning whether we also should **discuss nuclear power** when we discussed nuclear waste.
 - ⇒ Of course the **technical aspects** also have to be included, such as the criteria for choosing the method and siting.
 - ⇒ We discussed the scale between **best siting to good enough siting**, and where on that scale we want to be, as a local community, as authorities, as an operator, as a citizen.
 - ⇒ We talked quite a lot about **funding** to enable the citizen to take part in the decision-making process, and we found that this is very crucial and had to be addressed in the further work of COWAM. The funding of local authorities, local NGOs and national NGOs have to be discussed. But the question remains: who funds, according to which rules ? We could not solve that, and maybe this is a national question.
- The need for **independent experts** is also very crucial. We formulated a proposal: there should be an **EU pool** of independent experts for the use of public or citizen's organization or smaller organizations. There has to be a **structure** on funding and **resources** for making independent experts reachable for the different stakeholders. Stakeholders can today only turn to the operator's experts.
- Eventually, we were also discussing the fact that we should **not be afraid to address controversial issues** because these are important for driving the process further.

Working group 8

BY MR. BERNARD NEERDAEL

This first group of operators comprises three delegates from Belgium, three from Sweden and three from U.K., two from Switzerland, and the moderator was from France.

We will find most of the items we already saw on the overheads from the previous reports. We tried to structure them, not in a list of items, but in some topics.

The most important topics are the **key aspects of a generalized decision-making process**.

We think **as a starting point**, we need not a high level waste, but a **high level vision**, including or not views on wider issues. The decision making process for the use of waste disposal is a good example of that. But when defining this, when looking for these visions, we need to consider the reasons why : this would lead to a **strong and robust statement of policy**.

The next sentence is not a statement, I would say, it is more a question we can address at COWAM. It would be whether *a clearer understanding of the relationships between broader nuclear issue and the waste management debate could help us to understand the motivation of stakeholders in the decision-making process*.

What are the **aims of policy implementation**? I think the key point is to **develop a step-wise approach**. We have already seen this in the previous working groups. What does this mean? An approach that is *flexible and can respond to review and consultation with identified milestones to allow review of progress and process and redefinition of the way forward*. So it is really a robust policy and we need flexibility to adapt it with time.

In this context, we made some recommendations that we think are important.

- The first one is that we have to **focus on process and principles**, and not on one predefined solution. I think it has also been raised from the previous speakers.
- The second point is that **inclusive consultation at each level** of this step-wise approach and the required **transparency** are essential.
- The third point is that in the consultation, there must be a **balance between the local and the national levels**. Of course, this will depend on the context. But this issue of balance and timing about local, national consultation also came up regularly.
- Perhaps a point that was not yet mentioned in great details is the **need to recognize the shift from technocracy to democracy**. What do we mean here ? We acknowledged that the legitimacy of engineers and scientists is becoming lower. On the other hand, today the regulatory bodies seem not to represent the public fully, and this is another evolution I think we have to take into account.

This was the main issues. We raised other issues again about :

- **Stakeholders**. We need a **good understanding of capacity and channels to influence the decision-making process**. I think it has been expressed by speaking of agendas. What are the possible achievements of stakeholders? Of course the **relationships need to be clear**.
- **The process of consultation**. It is related to the issue of funding. We heard it also a lot of times. This process needs **resource, time and money**, and it can be helped by the presence of an **autonomously administrative fund**. Who could manage these funds? This is the point we have to think about in the future.
- **Local involvement**. It is important that we have a **framework** - I will not say a contract or an agreement, but a framework - **for responding to local issues**. This framework should be established in consultation **before potential sites are named and nominated**. I think this is one point which can improve things in the future. This framework of course will have to be depending on the situation, the context, and so it will require **adaptation to specific locality**.

Working group 9

BY MS. SAÏDA ENGSTRÖM

My group comprises operators from Great Britain, Belgium, France, Sweden and Spain.

We started discussing the lessons learned from the case studies.

As regards **Sellafield** we felt that it was **not a clear and beforehand defined decision-making process**. We felt that the **safety regulator** was **absent** in the decision-making process, it made this latter a difficult one. It was also a hurdle to have **all the issues stuffed into the public enquiry** at the end of the process. A step-wise process would have been much better. The public enquiry is efficient for highlighting controversial aspects and issues. A well-prepared enquiry could bring about a good closure. But in our discussion, we reflected on the adversary aspects of the enquiry. This should be reflected upon as one of the things that could make such an exercise not always useful and constructive.

The **operator openly recognized deficiencies** in the decision-making process. It has been actually declared by Mr. Murray the first morning. As regards the waste management, the **secretive nuclear tradition** inherited from the military activities in the younger age of nuclear activities is also a burden that one has to put into context of the Sellafield case and the British situation.

Moving over to the **Swedish situation**, we actually gathered the Tierp case and the Oskarshamn case. Even though these two communities were different - Oskarshamn, on the one hand, was a municipality hosting nuclear facilities since a long time, thus, SKB was not a strange bird in their sky; Tierp, on the other hand, was a newcomer into the nuclear question - we could still find common points of view that could be shared between the two communities. There is a **strong local involvement** and there is a visible and very much wished **involvement of the regulator**. As regards the work of the municipalities with the feasibility studies and the siting issue, we felt that the **structure** of this work was **clear and simple**. The **process is ambitious**. We felt that the **communities would like to avoid polarization** and they worked broadly with all stakeholders in their own communities regardless of their opinion and stance on the siting issue.

When we discussed the Swedish cases, there were some comments. The **Belgium partnership is partly based on the Swedish process** as we described it above. There were some comments about **the central government not being visible**, and the fact that **problems are left to local municipalities**. I think that we had some discussion about that this morning. It was not stated whether it was wished for or not, it was just put on the table as some issue. Maybe it should have been further discussed or developed.

There was a point taken by a few in the group that there is a **need for further structuring of the power on the process**. There were lots of comments about the process as being one engineered by the implementer. Maybe the power on the process should be restructured so that others could have a little bit more influence or more impact on the engineering they processed.

Also there was a discussion on the **use of money for interest groups**.

As implementers we discussed two cases. Then we have discussed for a long time the **observations made country by country as regards the decision-making process** :

- In Sellafield the process for the Rock Characterisation Facility was not inclusive and transparent (Nirex's view)
- In France, following a failure in the early 1990's a law was voted in 1991 which provides a new framework
- In Belgium there is currently a partnership process with three communities (for low-level waste). The quality control is an important issue in this process.
- In Switzerland, following a failure in the mid 1990's, the process is now on good track.
- In Spain, there also was a failure in the mid 1990's as regards the site selection process.

Running through the whole list, you can very easily see that everybody had failed somewhere and now nobody sees it as a negative thing. The operators felt beneficial the learning of restructuring programmes which took place in France, in the early 90s or, in the mid 90s, in Switzerland and Spain. We had an extensive presentation of the U.K. case, and Mr. Thegerström also explained the Swedish situation that is

both the drillings in the late 80s, and the feasibility studies in the north of Sweden in the beginning of the 90s. This is a good sign. We think of ourselves as implementers. We can see that getting punched sometimes is hard. It hurts of course, but I think we see also the benefits of regrouping and getting further and making a better work, as we do the work here.

So what would you like to give COWAM? There would be quite a few management issues. But we picked and discussed actually a couple of them. We thought that **funding** was an issue that operators would like to maybe discuss more. This is linked to the quality of the representative democracy. In the model of Oskarshamn, as it has been explained to us, the community takes care of all its inhabitants regardless of what kind of opinions they have. There is a programme taking care of everybody's needs including the special interest groups' and their funding. When we discussed that, we wanted to make a clarification. That does not mean a critical scientific review. We thought that when carrying out science work and reviewing, there is also a major and very strong aspect of a critical view on the subject.

We talked quite extensively about the **dialogue influence on the development of concepts**, and **safety requirements versus other values**. An example of that is retrievability : how much would you give up on your conceptual design on your technology, for instance, in order to gain other things that are pushed forward by the governing values of a society at a certain time. We think that is a very important issue to discuss.

Working group 10

BY MR. RISTO ISAKSSON

Here are some general remarks of the discussion we made in the nuclear authorities' group.

We found out that the **early involvement** of every group which could be involved in the decision-making process is essential. This means all local groups and this means also regulators, if they have a role in the decision-making process from the beginning.

This group recommends that a primary way to get local involvement in the decision-making process is by the **elected representatives** of the municipalities. This also means that these non-governmental organizations, etc., are an important extra for supporting this decision-making process, but we believe in a democratic decision-making process.

This process might be well designed, but if it is an orphan, if there is no **guardian for this process**, it does not work, and it can be a failure.

All members representing countries where this process is currently on going highly recommended that there should be **resources from the Government to the local authorities**.

Stretching and challenging : authorities must invest in trust, must be trustworthy to the local people. Somebody in the group reminded another meaning : this could be understood as the authorities requesting to be trusted, but this was not the meaning. Stretching and challenging is a mutual process where every one is on the same level, trying to open and develop the process.

Who does what ? There has to be strict roles for everybody within the process. The polluter pays principle must be taken in this : the operator is in charge of the waste it produces, there must be no mix with the authorities. The authorities are those who have resources to see that the operator does its job as it should.

We also recommended a **step by step approach with a road map**. One should not try to have the whole package approved at the same time.

Adaptable decision-making process : when a country chooses its own national decision-making process, it should be made so that it can be adapted according to different local communities. We heard from our Swedish colleagues that cultures in the local communities differ one from the other in Sweden. The decision-making process must be flexible.

Local veto right was seen as most important. Eventually, every one in the group agreed with principles of **openness, transparency, accountability** in practice, not only in words.

Panel session and discussion with the audience

MR. GILLES HERIARD DUBREUIL

We have discussed the organisation of the discussion with the panel members. It came up that we have three main questions we would like to discuss with you. The first one is the necessity of a new decision-making process for nuclear waste management. The second issue is the linkage between the national and the local level, and especially here, we will have the point of view of elected bodies. And then the third issue is about the COWAM project, its outcome and perspective for the next steps.

So we shall now take the first issue, the necessity of a new decision-making (DM) process. This is a question more than a statement. We will discuss that first with Mr Thomas Flüeler. He is an expert from Switzerland and involved in DM process analyses with the Swiss Federal Institute of Technology ETH, he is also an environmental consultant, and he is a member of different committees in the area of nuclear activities in Switzerland: the advisory commission KSA to the Federal Government and a regional commission (KFW) on behalf of the Government of Nidwalden where the LLW site project Wellenberg is situated.

MR. THOMAS FLÜELER

Thanks a lot. As to the necessity of new DM processes: With respect to possible perspectives towards COWAM, there could be two extremes to follow. One strategy-a misuse in my view-could be that COWAM is just another, refined, version of risk communication. First, implementers and regulators had the DAD ("decide-announce-defend") approach, then they invented public relations or risk communication, and now they come up with COWAM That is one way to look at it.

The other extreme could be, let's say, some frowning by the implementer saying: Well, now you come up with another process or instrument, another assessment, another forum and formalization we have to go into

I would say COWAM it is something in-between. If you look at the whole structure, it is possible to integrate what we are exploring here into the so-called "defence-in-depth concept" very familiar to the technical nuclear community (see **Figure 1**). You have the engineered, intrinsic, and performance robustness types, together giving the technical robustness. This is familiar to people working in the performance assessment area. We with COWAM are somehow in the next adjacent layer: societal (=decision) robustness, leading to the, supposedly, integral robustness of radioactive waste management. Of course this is quite simplified and seems mechanistic, there could be intercepts or puzzle-like shapes. It is to say that if you look at the system (in **Figure 2**), in the centre, you have the waste producer, then you have the safety authorities, you have the NGOs somewhere coming in, and at the end or, let's say, at the outskirts (in fact: envelopping the whole!), you have the public, local or regional. This modelling, as you might suspect, is not done by chance, but reflects my Swiss background meaning that the local public has the last say. This is just-I know-one way to look at it, and I am not going into it very much further.

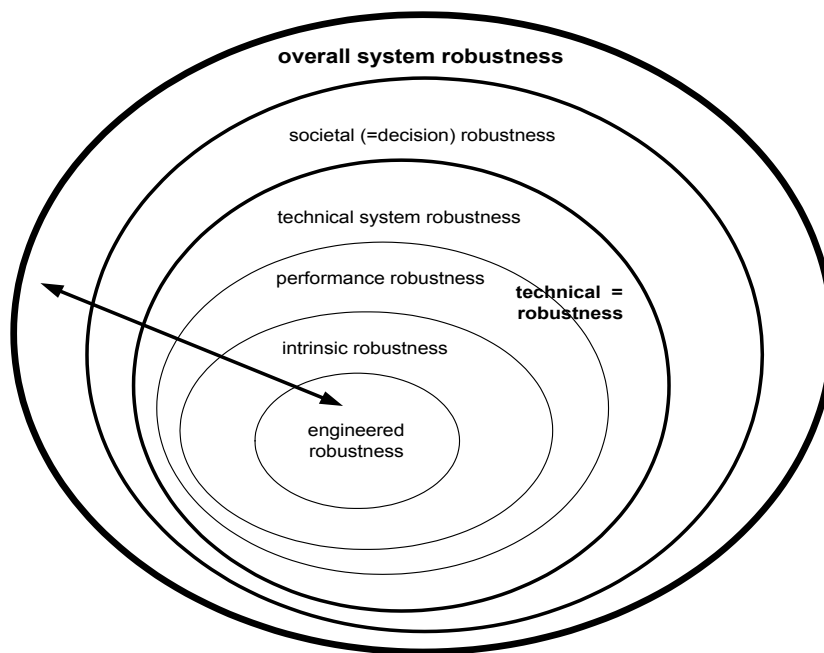


Figure 1. The various types of robustness are idealized as lines (or “shells”) of defence in depth. The overall system robustness comprises two main sub-shells: the technical robustness and the societal (=decision) robustness. They are not strictly sequenced as depicted but interlaced (e.g., societal decisions on nuclear legislation have impacts on the disposal design directly influencing engineered and intrinsic robustness). This is also to say that the approach is not “objectivistic” by putting technical and societal “robustness” on the same level. The final and decisive validation is the implementation of a disposal concept with demonstrated long-term safety backed up by respective decisions and actions (from Flüeler, T.: Robustness in Radioactive Waste Management. A Contribution to Decision-Making in Complex Socio-Technical Systems. IN: E. Zio, M. Demichela & N. Piccinini (eds.): Safety & Reliability. Towards a Safer world. Proceedings of the European Conference on Safety and Reliability. ESREL 2001. Torino (I), 16-20 Sep. Vol. 1, 317-325 (Politecnico di Torino, Torino, Italy, 2001). © Thomas Flüeler, 2001

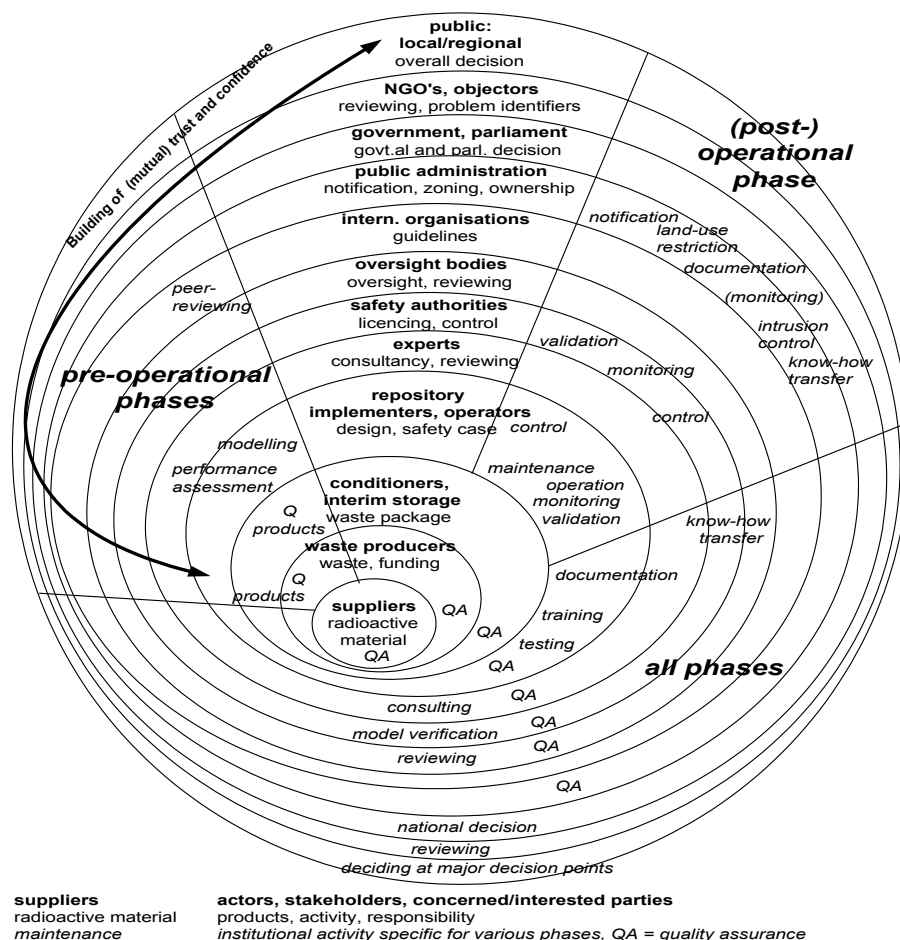


Figure 2. Societal and institutional robustness. Stakeholders are to act according to their respective responsibilities. Dependent on their mutual (mis-)trust, their activities serve as institutional barriers and potentially lead to a consistent, i.e., robust decision, backed up by incremental building of confidence in the overall disposal system. Attention to special activities is given in various phases (after Flüeler, T.,: Radioaktive Abfälle in der Schweiz. Muster der Entscheidungsfindung in komplexen soziotechnischen Systemen [Radioactive Waste Management in Switzerland. Patterns of Decision Making in Complex Socio-Technical Systems]. Doctoral dissertation no. 14645. dissertation.de, Berlin (ETH, Zurich, 2002). © Thomas Flüeler, 2002

Let me just point out one insight: Having looked at the whole decision-making process with an empirical study in Switzerland [see reference below], I want to mention that I found several salient topics initially underrated by the “nuclear establishment”, some of them being procedural, others technical (**Figure 3**). Both types of issues were raised by either the public or counter-experts, third party experts, which means experts not belonging to the implementer or the safety authorities. Where you see the corresponding letter (P, etc.), that was the first or repeated time the issues or criteria were raised and asked for by “outsiders”. As a reference date you have the establishment of NAGRA, the Swiss implementer, in 1972. Eventually, where you see the bulbs lit, the issues were officially-incorporated into the concept. This multi-perspectiveness has, in my view, lead to a substantial added value of the project(s) and the processes. What we are doing here, I hope, is to contribute to such a productive development.

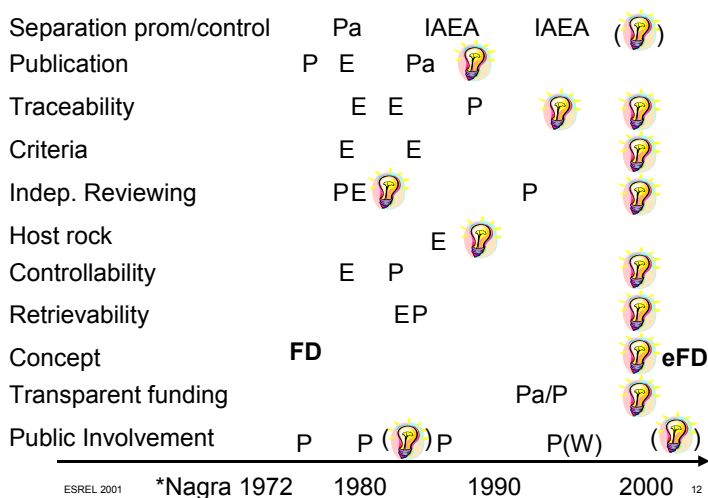


Figure 3. Integration of pertinent issues into the official Swiss radioactive waste management concept. Time lag between first proposal and inclusion (bulb) into concept. Abbreviations: P public, Pa national parliament, E (counter-)experts, W vote against first application at Wellenberg, FD final disposal, eFD "extended" final disposal (with long-term controlled pilot facility) (after Flüeler, *ibid.*). © Thomas Flüeler 2001/2002

MR. GILLES HERIARD DUBREUIL

Now we shall ask Valentine Vanhove, member of ONDRAF, the Belgium nuclear waste operator, to give us a view on what a new decision-making process means from the point of view of the operator.

MS. VALENTINE VANHOVE

Thank you, Mr. Chairman. I wanted to start with the physical reality we are confronted with. Radioactive waste is a reality in our society, and we have to deal with it whether we like it or not. Now as an implementer, we have the mission to safely manage the waste on a short and on a long term. So we feel that we should act today for a safe future.

Long-term management of radioactive waste today has to be based essentially on two main criteria: safety and acceptability. These two go hand in hand. It took us, as in other countries, some time to learn that a safe solution for the radioactive waste management on the long term should not only be based on a technically safe solution, but that the social aspects should be integrated in the process. What does that mean for us? That our traditional strategy, a DAD strategy, as said my colleague here, first of all, "*decides, announces and then defends*" should be evolving toward a "Triple D strategy", which is in fact "*dialogue, decide, deliver*".

What are the implications of this? First of all, this means that the factual basis which is provided by the technicians is only one factor in the decision-making process amongst a lot of other acts and fact, as emotional, societal aspects. There is a second implication, and that is about attitude and behaviour. If we want to evolve from a purely technical approach towards a more societal approach of radioactive waste management, then I feel that we should leave the proponent/opponent polarization, because that is not a dialogue aspect, in fact it is a battle. We are fighting one other. I feel strongly, that we should change that.

I think we should look at the issue of radioactive waste management from another level. I think we should look upon it as a problem where every citizen, which you are, is confronted with; and every question, every fear, every command of each citizen is worthwhile to be listened to, to be heard, and that is what we should do. Now that is about attitude and behaviour I am talking then. So we should recognize as an implementer that there are other topics and issues to be discussed than only the technical aspects, and we should have an ear and a heart for it.

What I am going to point out more is what can be the role of the implementer in a new decision-making process. I would think that the role of the implementer should be first of all as an initiator, a facilitator for the decision-making process. He should give support to the local communities which have to develop

their own project. We should accept that other people can be involved in the process and will be involved, and that we only are one partner in the multi-stakeholder approach.

Now what can be and should be the commitment of the implementer? If we launch a dialogue that implicates that we, as an implementer, should be flexible, open-minded and willing to review some aspects of the concept, so that means as well that the technical concept of a long-term solution might be adapted, following the recommendations and demands from the local participants in the project.

MR. GILLES HERIARD DUBREUIL

Thank you very much. We shall now move to another very important actor as we have seen today and yesterday, which is the regulator. Hugh Fearn from the Scottish Environment Protection Agency will now bring his point of view.

MR. HUGH FEARN

I was asked why I was here and taking part in the COWAM project. It was quite simple. I have come to listen and learn on how public participation is taking place in different communities, how it is and can be of benefit to the development of strategies for the disposal of waste. This fits in with my agency's view of early and meaningful public participation in such matters. And this should hopefully ensure that key issues have been explored before regulators have to make decisions on what and where disposals can take place, subject to what conditions and limitations.

I think this meeting is very timely for us from the U.K. As you heard yesterday, the British Government has begun a consultation, a four-year process on setting out a new policy for radioactive waste management, and I am hoping that the two days have proved very useful for my other British colleagues and that they will be able to take back and feed that into the U.K. consultation with a lot of the information that we have all heard and seen in the working groups.

I would just like to finish by saying that it has been my experience that the public and interested parties, if not treated courteously, if not listened to, and if not given suitable and acceptable information, tend to bite.

MR. GILLES HERIARD DUBREUIL

Thank you. We shall now continue with this reflection and move to the elected representatives' viewpoints, which articulate the national and the local point of view.

The first to speak is Mr François Dosé, member for the French parliament for the region of Meuse where the Bure site is located, and also Mayor of Commercy, a middle size town near Bure.

MR. FRANCOIS DOSE

I am sure that the collective interest is not only the adding up of all the private, public and corporation interests. There is not always harmony between the national interest and the small territorial interest. We must say this to be able to take in hand these contradictions and to find how to solve them.

For instance, the law that enables the research on the management of nuclear waste was voted unanimously by all the political formations, but the same members of Parliament, on the right or the left, would sign something completely in contradiction with that vote when they are at home.

My grandmother used to tell me this. All the villagers wish for the reorganization and regrouping of land, but they expect that it only hits the neighbour and will never hit their own land. That is the kind of problem that we have to manage. That will be that much more difficult that we are going to enlarge the reflection area to a European level. National and international interests should be able to take into account local territory interests. The sum of the territorial interests does not bring automatically to the national interest.

The second point enables us to say that in a democratic country, the law defines a perimeter. Outside this yellow line you are outlawed. The law gives you better and more or less sufficient tools but the law is lived and made alive daily by a great number of actors at the local level with local elections, and the work achieved by the associations. I think every politician needs to experience the law. One has to

examine what is experienced daily within the context of what is allowed by law. And to finish, concerning the relation between the national and the local levels, we will have to examine what we know and what we can do : this is about knowledge, about power, and their relationship. Certain contributions bring the issue of who has the power, who has the knowledge. It is a challenge. And more, the European territorial authorities involved in the nuclear experience will finally find interesting solutions to enable people individually to live as a user, as a consumer, but also at the same time - because of this democratic political life - to live as a citizen.

MR. GILLES HERIARD DUBREUIL

Now we shall have the point of view of Ingela Westberg from Sweden. Mrs Westberg is a local elected representative and is also involved in the environment administration.

MS. INGELA WESTBERG

I was asked to sit in this panel to give some conclusions for this seminar, and now I find it very difficult because I think the ten groups have already given the conclusions in a very good way : we need a wider dialogue, funding, veto and all other matters that we have in the resumes. That shows also that the future of COWAM is going to be busy but most needed.

We know what is the common sense that everybody wants from a local politician in his point of view. It is very difficult to say. We have all kinds of group wanting us to do different kind of things, having their interest in this issue, and it is hard to make it good for everyone, I think. We just have to do our best. But even this panel is showing how many inputs there are in these questions.

My personal opinion is that there are now a number of reports and questions and issues that COWAM will discuss, but the decisions are finally taken by the politicians, and that brings my thoughts to the part of the report² included in our folder. I have been with the group that brought this up. The decisions that we make on the local level must be supported by the citizens, of course, but we also in this situation have to make decisions that will last for such a long time that we can not see the end of it actually. If we see ourselves as a link in the long-time chain, then all we have to do is do our best now to keep the society open and democratic. We must also secure that future generations get the knowledge and have all the information they need, technical support and funding, and that is necessary to take care of nuclear waste in the long run.

It does not make things easier perhaps for us, but it can be one input to look at things from a local point of view.

MR. GILLES HERIARD DUBREUIL

Thank you. We shall now move to the third theme, which is the outcomes and the perspective of COWAM. I will leave the floor to François Dosé, who will give his impression, as we are reaching the conclusion.

MR. FRANCOIS DOSE

One has to respect the basic decision that every nation has taken on this question, but we have to see how we can do methods to avoid the mistakes that other people have done and benefit from where they have been successful. I think this is important to keep that in mind. We have got to avoid the kind of actions when I saw some public displeasure in election times. I think we have got to discover together what we have to put in common. It is not easy sometimes, but it is important.

If COWAM enables us to gather experiences both successful and failed, it would be very interesting. I add two propositions. I think we have got to continue these seminars a bit away from any power place, where we can exchange with partners from different countries, with different roles. I invite you all in France in the Meuse, near Bure, in a few months, in February-March 2002. In Switzerland a few months later, in September, we will be able to build a network of towns that are concerned by these particular

² *Responsibility, equity and credibility - ethical dilemmas relating to nuclear waste*, Special Advisor for Nuclear Waste Disposal (dir.), Kommentus 2001, Stockholm

problems, enabling us to exchange on a constant basis. Then perhaps we will be able to remember : "Oh, well, this is where the idea started". Thank you very much for those who organized these two days, where we have been able to share these comments and reflections.

MR. THOMAS FLÜELER

When I came here, frankly I have to say that I thought: "Well, the best way would be the Swiss way". The Swiss way would mean that everyone on the local level is able to vote and is going to vote, and that will be the final validation of the problem. You see that is the self- confidence of the very humble Swiss!

Being here, listening, discussing, I really learnt a lot. One thing that, I think, COWAM should identify is the the crucial and suitable structure of a good decision-making process stating the functions for and of local communities and other stakeholders but leaving room for adequate instruments in the various and different national and regional contexts. It should enumerate such functions with some of the elements you should have, like benchmarks, milestones and so on, but it should not say: "Well, you have to have this instrument, this is what you have to do, you have to adopt what the Swiss or the Americans do. The recommendation I would give, is that one should look at some instruments like referenda or the political local veto here in Sweden, but also, for instance, the enquiry in the U.K., and they all might have the same function if they are properly managed.

So this is not a matter of saying what is a good way, but it is a matter of having the good functions and implementing them appropriately.

MR. GILLES HERIARD DUBREUIL

In order to close this round of intervention, I will ask Mariano Vila d'Abadal, general secretary of AMAC, the nuclear community association in Spain, also involved in GMF network of European nuclear communities, to bring his views on this first seminar.

MR. MARIANO VILA D'ABADAL

I believe that COWAM has been a fantastic experience. This is the first time I believe that in Europe a seminar has been organized involving all the different actors of the nuclear world, but in which we, the communities, the municipalities, have a major role. Therefore, I would like to give the credit to COWAM and tell them that you have a fantastic future because for the first time you are respecting the proportion of major roles in the nuclear arena.

There are many different regulators and local participants, and that is the way it should be. There should be many more local agents than regulators, but I also believe that the work that has been done in COWAM will only bear its fruit if we can maintain the contact very enlivened, not only with two more seminars, one in February 2002 in France, and another one in September 2002 in Switzerland. We should be able to create networks with permanent connections between other different actors.

The European operators, as Europe starts growing and increasing its influence, have created their own network to be able to establish common policies and exchange of information. The regulators in Europe have done the same, but the district municipalities and local actors have not been able to do it yet. We started many years ago to work like this and we have a network that is taking its first steps. It is a network of municipalities located in nuclear areas that meet regularly and are trying to influence the European Union. We are trying to make the voice of the local actors be heard in the decisions of the European Union, because finally, who is going to take the decisions in Europe? The decisions made in Europe will never be complete if they do not take into consideration the towns and the citizens of those local areas.

In our organization, of course we will try to help to maintain these contacts very enlivened, and we would like to participate actively in COWAM, with the objective that the local actors have a permanent forum for a contact. Thank you, COWAM, very much, and we will see you in the next congress.

MR. GILLES HERIARD DUBREUIL

It seems that there are a lot of opportunities for local territories to network, and they will take the lead

into this direction. We now have half an hour for the audience to give their views and to introduce last concluding comments.

MS. JENNY LUNDSTRÖM

A question came up to me during the presentation from the groups in the last session. The presentations focussed on the decision-making process at the municipality level: should we accept or not a waste disposal here? In fact we are dealing with two different types of decision-making processes: the decision-making process at the municipality level and the national decision-making process approach for the nuclear waste issue. It has not been addressed, I think, here, and I do not think the panel will have the answer for it, but I think it should be included in the future in COWAM.

MR. TORSTEN CARLSSON

Just like François Dosé said, I think it is incredibly important to talk about maintaining a local level in the decision-making process. The municipalities, as in my experience of the Swedish municipality, must maintain their independence to shape the decision-making process and to deal with the issue, on the basis of the views of the municipality and their inhabitants. That is incredibly important. We can not have a situation where the central government decides on how to deal with these issues. However, security aspects of course in this case may be an issue when you need to agree on a standard security. But you have to retain the decision on a local level when it comes to a decision about repositories and management of nuclear waste.

MS. RACHEL WESTERN

Thank you very much. I think we need to avoid the game of ping pong where we bang radioactive waste from one location to another. We need to take an overview, where we look at radioactive waste management as a whole. I think this may be an extension of Jenny Lundström's point.

In Britain, we might need to look at long-term storage, so the debate that we need to have might be slightly different than the debate which is going to be held in other European countries. I think the possibility of stretching the debate and funding the opposition which has come out today - and I think that is very welcome - may lead to a serious addressing of the generic issues of disposal, and possibly to a much more circumspect view of the nuclear issue itself.

MS. LORRAINE MANN

I think one of the things that I have learned during this seminar has been the differences as well as the similarities that are between circumstances in different countries. And I think that is one of the things that we really have to keep at the forefront of our minds. I do not think there is any possibility of one issue fits all approach.

There is just one particular word of warning I would like to give. It is often assumed that democracy operates effectively at local level throughout Europe. Now that is not necessary the case, and I think we have to be cautious that as well as having local municipalities and local authorities involved, we also involve all other actors, and we do not use local authorities as a surrogate for the local interest.

In my own area, we have a difficulty whereby the pay for councillors is very low and the travel distances can involve four hours' travelling. As a consequence of that, people can not work if they are councillor, they can not have another job because of the time it takes up. The result is that half of the seats on our local authority are uncontested at each election. People can sit in the local authority for ten, twenty years without ever going through an election.

So we have to bear in mind that municipalities should be involved. We have to retain the flexibility of also involving other local villagers.

MR. JAMIE WOOLLEY

My name is Jamie Woolley from Nuclear Free Local Authorities, U.K. I just wanted to make the point that

we are discussing what must be one of the most elaborate decision-making processes to deal with an environmental problem that we have yet confronted. And it is very ironic, I believe, that these discussions have become necessary, have become so long-winded by necessity when the technologies that have led to these problems were introduced in most countries with so little discussion.

I do feel, when regulators say that it has become necessary to abandon a "decide, announce and defend strategy", they would need to pay more compliment to those political forces that have made the technocracy review the good sense of the technology it has introduced, and to take full account of that. There would need to be a very careful appreciation of exactly how funds will be provided to those who must put time aside to involve themselves as citizens in these debates, and the funding source for those funds should be clearly identified as those who have created the problems in the first place.

In my view, it is totally wrong for a municipal authority to have to bear the cost of involvement in these decision-making processes. The money must be sourced from those who decided to wish these technologies on our societies in the first place.

MR. HARALD AHAGEN

This is the first time many of us meet and this is the first time for many of us that we meet other municipality representatives. They are all involved in the detail of work that we are doing. And we have presented overviews, schemes, of how we organize, how we think about our powers, how we relate to the other players. But we have never been down to what really bothers us everyday, and that is how do we get to the citizens. How can we go back to our councils and report a true picture of what people really think on these issues, and we do not create a ditch between us and the voters, or the public?

Those methods can be traditional. I do not think we should throw out those traditional methods of hearings, inviting people to panel discussions, but there is a very, very low percentage attending. On the other hand, people have revolutionary ideas how the IT work is going to take over our communication with the public, with home pages and so on, and that does not work either.

So we have to use the traditional methods and have to find new, more innovative ways of getting to the public. That is basically what we are doing in these municipalities. I learned from listening in my working group how they do that in Belgium and how other programmes tried. There is nothing written about this. We never talked about this except internal discussions.

So I think we need to strive to get down to that level of discussion: How we are getting to the understanding of the people's concerns are ?

MR. GILLES HERIARD DUBREUIL

Thank you very much. Before closing this panel session, I wish to thank the members of the panel and also the audience for your participation. Thank you again for Oskarshamn municipality for hosting this first Cowam seminar.

MR. TORSTEN CARLSSON

Thank you for the invitation to France and Switzerland next year. I look forward to be there again. Dear friends, seminar people, those days have been successful in my opinion. The discussion has been open, transparent, and the discussion had also shown that we in the different countries have different opportunities to handle the process locally, regionally and nationally.