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MEMORANDUM TO: N. King Stablein, Section Chief
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SUBJECT: TRIP REPORT: INITIAL MEETINGS OF THE NUCLEAR ENERGY
AGENCY'S INTERNATIONAL FORUM ON STAKEHOLDER
CONFIDENCE AUGUST 28 THROUGH 31, 2000 AND
JANUARY 17 THROUGH 18, 2001

Dr. Janet P. Kotra, of the Division of Waste Management, represented the Nuclear Regulatory Commission at the initial meetings and workshop of the Forum on Stakeholder Confidence (FSC) held in Paris, France. The U.S. Department of Energy and the U.S. Environmental Protection Agency also sent representatives, as did implementers and regulators from more than 15 countries. The opening workshop took place at the headquarters of the Organization for Economic Cooperation and Development (OECD), August 28 through 31, 2000. A second "working meeting" of the FSC was also held in Paris on January 17 through 18, 2001. The Radioactive Waste Management Committee (RWMC) of the OECD's Nuclear Energy Agency (NEA) chartered the FSC in March 2000. The FSC is expected to serve as the RWMC's main support group to keep under review the worldwide experience of its member organizations in outreach programs and to identify and examine issues affecting the confidence of stakeholders in radioactive waste management projects. The charter extends until Spring of 2003, when the RWMC will decide whether to extend the mandate of the FSC or to address stakeholder confidence issues by other means.

Inauguration and Initial Workshop

The purpose of the first workshop, in August, was to provide an opportunity for forum members to meet one another, to lay the bases for future working programs, and to encourage exchange among the participants. To provide guidance to the forum, and to foster high-level contributions and visibility, the workshop was preceded by a half-day inauguration event. Members of the RWMC and invited speakers offered their perspectives on the value of stakeholder confidence for effective radioactive waste management. The workshop itself comprised five working groups, each of which addressed a different topic. These topics were: (1) the changing environment for waste management programs; (2) trust and the institutional framework; (3) "stakeholders" and "the public"—who are they?; (4) Is there a new dynamics of dialogue and

decision making? [J. Kotra, chair]; and (5) are waste management institutions set up for achieving stakeholder confidence over long time periods? As a case study of how a regulator has experienced and responded to the "new dynamics of dialogue," J.Kotra opened the 4th working group with a brief presentation summarizing the formation and activities of the NRC's High Level Waste public outreach team.

Plenary meetings, with guest speakers, addressed each of the topics before the discussions of the individual working groups. The working group leaders summarized the results of their respective sessions, and were assigned as an acting "core group," to organize future meetings. This group, which includes NRC's representative, aided the subsequent preparation of a workshop summary document (Attachment 1), will develop proposals for future forum products, and prepare work plans for future meetings. At the OECD/NEA workshop, Investing in Trust, November 29 through December 1, 2000, the provisional FSC chairman, Yves LeBars, presented a paper summarizing the first FSC meeting and workshop (Attachment 2).

Working Meeting

The FSC met for a working session on January 17 through 18, 2001. At this meeting Yves LeBars was formally elected chairman, and members of a core group (including J.Kotra) were also elected. The forum received briefings on other relevant international activities from representatives of International Atomic Energy Agency, the European Commission, and other OECD programs. The FSC reviewed, modified and approved a draft strategic document spelling out the forums mandate, goals, and mode of operations. The forum members decided that to carry out their mandate, additional representation of the views of civil society is necessary, beyond that provided by the delegates from national safety authorities, implementing agencies, and R&D organizations who serve as forum members. This broader, additional representation will be obtained through topical workshops organized by the forum. The forum agreed on a practice of alternating working meetings and workshops. The next workshop, possibly in Finland, will examine, in detail, the interactions of local stakeholder groups with government authorities involved in the siting of a geologic repository. This workshop is tentatively scheduled for November or December 2001.

At the request of OECD staff, J.Kotra agreed to present a brief informal review, summarizing lessons from the inaugural workshop (Attachment 3). To encourage the exchange of public outreach tools and techniques developed by member programs, J.Kotra also made a more formal presentation of materials developed by the HLW public outreach team to explain NRC's use of performance assessment (Attachment 4). At the conclusion of the meeting, the forum agreed to: 1) develop a document on principles and good practices of stakeholder involvement; 2) seek updated responses from member programs on the status of stakeholder outreach; and 3) establish a subgroup to collect and review valuable sources of information, materials and tools for enabling dialogue with stakeholders. NRC staff will participate in all of these efforts.

Attachment: As stated

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RADIOACTIVE WASTE MANAGEMENT COMMITTEE

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Forum on Stakeholder Confidence (FSC)

**OVERVIEW AND SYNTHESIS OF THE INAUGURATION, 1ST WORKSHOP
AND MEETING (28-31 August, 2000) OF THE NEA/RWMC FORUM ON
STAKEHOLDER CONFIDENCE,**

The present Overview and Synthesis summarises the presentations and discussions at the Inauguration, 1st Workshop and Meeting of the FSC. It is based on the notes taken by the Secretariat and is conceived as a stand-alone document providing in a concise form information on how the meeting developed, the working atmosphere as well as the most important messages. The document is provided to NEA committees for their information and use.

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**NEA/RWMC¹ FORUM ON STAKEHOLDER CONFIDENCE
INAUGURATION, 1st WORKSHOP AND MEETING (28-31 August, 2000)
OVERVIEW AND SYNTHESIS**

Background

In recent years, the waste management institutions have become more and more aware that technical expertise and expert confidence in the safety of geologic disposal are insufficient, on their own, to justify to a wider audience geologic disposal as a waste management solution, or to see it through to successful implementation.

Partly due to a sensitivity of the public on all matters connected to protection of the environment, to nuclear power, and especially nuclear waste; partly because of the unique nature and required longevity of the proposed disposal concepts; and partly because of the changing societal conditions in the processes of decision-making, the decisions *whether, when* and *how* to implement geologic disposal will need a thorough public examination and involvement of all relevant stakeholders. The latter include waste producers, waste management agencies, safety authorities, local communities, elected representatives, and the technical intermediaries between the public and the decision-makers. The involvement of non-technical stakeholders will become increasingly important as more countries move towards siting and developing geologic repositories.

The decision-making process and avenues for stakeholders' involvement differ from country to country. It is important to identify similarities and differences, understand the key concerns of various stakeholders, and develop means to interact effectively. The Forum on Stakeholder Confidence (FSC) is charged with distilling the lessons that can be learnt from the national and international experience. The intention is to be useful to the NEA Member countries in their efforts to set up effective means of radioactive waste management, and in their obligation to take into account the input of the relevant stakeholders.

The aim of the workshop was to give a first opportunity to the members of the newly formed Forum to get acquainted with one another, and to lay the basis of its future working programme and working method.

In order to give guidance to the FSC and, at the same time, to give this initiative high-level input and visibility, the workshop was preceded by a half-day inaugural event. RWMC members and invited speakers provided their perspectives in the area of stakeholder confidence. Over the following days, five themes were addressed through plenary talks. The Forum also broke up into working groups on the five themes. Each working group first heard and discussed a national case study, and then developed orientations for future meetings. The deliberations of these highly interactive working groups were reported in plenary sessions. Finally, a closed-door session reviewed future steps.

1 . **Radioactive Waste Management Committee of the Nuclear Energy Agency of the OECD**

Overall, the entire event lasted three days. Its 75 attendees came from 14 countries and 3 international organisations. The participants had a very wide background, spanning both the technical and social sciences. Affiliations include universities, national academies, technical oversight bodies, safety authorities, implementing agencies, advisory bodies to government. In addition, a mayor from Sweden and a parliamentarian from France were amongst the invited speakers. Y. Le Bars, the president of ANDRA (France), chaired the workshop. He was assisted by C. Pescatore and H. Riotte of the NEA Secretariat. The latter received the professional support of K. Andersson and C. Mays.

The present Overview and Synthesis summarises the presentations and discussions at the Inauguration, 1st Workshop and Meeting of the FSC. It is based on the notes taken by the Secretariat and is conceived as a stand-alone document providing in a concise form information on how the meeting developed, the working atmosphere as well as the most important messages. The summary papers, which are available in the proceedings, contain the complete deliberations of the working groups and the actual texts by all speakers along with biographical details.

FSC Inauguration

Welcoming talks by speakers from the NEA and the RWMC

S. Thompson, Deputy Director General of the NEA, welcomed the participants and situated the Forum. Waste is the unwanted by-product of any industrial process and carries an environmental stigma. Radioactive waste is especially unwanted. Yet the issues of long time frames and the potential hazard are not necessarily unique to these wastes. There is a need, then, to clarify the issues, place the problem in perspective, and identify decision-making avenues that are within the framework of those identified by civil society for similar hazards. At the same time, potential problems and issues must not be minimised, and their solution should not be limited to the purely technical sphere. Active dialogue must take place amongst all interested parties.

The strengthening of public participation, transparency and accountability and, ultimately, policy effectiveness in Member countries constitute major areas of the work of the OECD. In this broader context, the NEA has an obligation to take up the challenges of understanding the needs of stakeholders and to provide a neutral forum where experience can be exchanged and analysed, and lessons can be drawn. The NEA strategic plan provides a broad framework for initiatives in this area.

Whilst this meeting is under the aegis of the Radioactive Waste Management Committee (RWMC), other initiatives are underway at the NEA dealing with the interaction with stakeholders. These initiatives are under the auspices of the Agency's Committee on Radiation Protection and Public Health, the Committee on Nuclear Regulatory Activities, and the Nuclear Development Committee. The RWMC Forum on Stakeholder Confidence is the first forum of its type worldwide.

S. Norrby, Chairman of the NEA RWMC, then spoke of the background of the Forum and the reasons why it cannot be a one-time initiative, but an ongoing activity of the Committee. The representation of industry, safety authorities, and governmental policy bodies make the RWMC uniquely placed to address issues in radioactive waste management. The NEA provides the needed neutral ground where cross-party dialogue can take place.

In a recent document² the RWMC identified public perception and confidence as one of the strategic areas where the Committee intends to promote common understanding and further dialogue. These issues have been most critical in gaining approval for development of repositories for long-lived radioactive waste at specific sites. This is also shown in a recent study by the Committee that reviews progress in geologic disposal in the last decade³.

A large amount of information, experience and theoretical analysis has been accumulated on the issue of stakeholder confidence in OECD countries. This is true both in the field of nuclear waste management and in other areas. The discussion of how decisions are reached in modern society on contentious issues should help place waste management and disposal in a societal perspective and remove it from the strict boundaries in which many place it.

The RWMC expects the FSC to keep under review the experience of its member organisations, to identify relevant stakeholders and examine stakeholder confidence issues, and to take action and become the preferred international forum for dialogue on these issues.

Invited speakers

Five speakers then addressed the Forum. These speakers gave the views and needs of implementers, regulators, local elected representation, national legislators and administration. The presentations often highlighted the siting of national facilities as a crucial step in any programme where stakeholders are drawn to explore and confront issues and interests.

For the sake of brevity, the items identified and/or discussed by more than one speaker are not reported at each time for each speaker. Rather they are italicised in the "bullet-point" summary below.

A. Hooper of UK Nirex provided the views of an implementer and reviewed the experience of the UK.

- *Management programmes have often included substantial public information and consultation efforts in their initial phases. However, these do not elicit massive response. Only when programmes move into a site-specific phase do non-technical stakeholders appear to take an active interest. It is thus a challenge to find ways of involving stakeholders early.*
- *Of special concern is the link between achieving a repository for radioactive waste and the future of nuclear power. This link - whatever it is in each country - must be spoken of openly and clarified.*
- A number of points must be demonstrable and clearly demonstrated to stakeholders:
 - *Waste management decisions and nuclear power decisions are separate;*
 - The implementer is performing a service to society;
 - The waste generators pay their share;
 - Financing arrangements are transparent;

² Strategic areas in Radioactive Waste Management. - The Viewpoint and Work Orientations of the NEA Radioactive Waste Management Committee, NEA 1999.

³ Geologic Disposal of Radioactive Waste - Review of Developments in the Last Decade, NEA 1999.

- The regulator, within its independent oversight role, is as committed as the implementer towards fulfilling the same government policy;
 - Institutional arrangements are robust, and meant to survive changes in political orientation.
- Proposals for further consideration by the FSC:
 - An increasing societal emphasis on environmental protection enhances the role of the Environmental Impact Assessment as a framework for dialogue. *Examine how the EIA is developing as an umbrella process for decision-making;*
 - Develop an international position on waste retrievability, its value and drawbacks, its implementation (including reversibility of decisions).
 - Explore best *organisational behaviour and culture with attention to trust building*, programme accessibility, and the recognition of uncertainty without destroying confidence;
 - Seek ways of consulting and involving broader segments of stakeholders.
 - Further reflection is needed on safety over long time periods: What time-scales have meaning and importance to different stakeholders? How can credible statements on arrangements for each time scale be developed and communicated?

Regarding the experience of Nirex and the UK, Mr. Hooper observed that:

- In the past, science and engineering skills have been seen as most appropriate for dealing with radioactive waste management tasks. Today, Nirex is hiring also persons expert in public decision-making. Women recruits bring a much-needed perspective.
- The failure to obtain the authorisation to construct the Sellafield Rock Characterisation Facility, a necessary step towards gaining experience and data in order to assess the feasibility of geologic disposal, called in question the entire policy of final disposal by the UK government. At the root of this failure lies the fact that stakeholders had not been told WHY this policy, and WHY NOW. Should this be seen as a “massive failure of policy” or “failing a good policy”? The policy of disposing of nuclear waste below the dynamic surface of the Earth has been again validated in recent UK fora (House of Lords inquiry, National Consensus Conference,...), and is supported by reference to international experience in constructing and operating L/ILW disposal facilities. The past failure appears thus to have been in creating the conditions under which the policy could be implemented.

A. Nies of Germany's Federal Ministry of Environment presented regulators' concerns. In discussing regulators' needs, Mr. Nies recognised that these might be pertinent to other institutional actors as well.

- Policy makers should review and communicate the assumptions, sources and consequences of policy choices. The same is true for regulators. **The public needs/wants to participate early in the decision-making process, when the “rules of the game” are being defined.** In particular, regulators must clarify the reasons and basis for changing regulations at later stages in repository development.
- Regulators must determine and then communicate to stakeholders where, when and how public and other stakeholder input can be accommodated. They must also communicate the bases of their decisions.

- *Independence, competence and effectiveness are essential for public confidence in the regulator. The regulator's role and responsibilities must thus be clearly defined, and separated from nuclear energy policy and promotion.*
- At initial phases of repository development everyone is a stakeholder, albeit often unaware of that role. In later phases of a programme, concerned citizens in siting communities take on a more central role. Also, the concerned citizens will change over time. *How to deal then with changing stakeholders?* A range of mechanisms for dialogue is needed to accommodate such shifts.
- Proposals for further consideration by the FSC:
 - Can people be convinced to cooperate in the solution to the waste disposal issue independently of their view on the desirable future of nuclear energy?
 - How can the public perception of benefits from radioactive waste management be increased? How can the perception of risks be improved?
 - How can radioactive waste disposal be made into a component of an attractive, acceptable regional development plan? How can a disposal facility be made into local stakeholders' « baby »? A working group has been established on this and other issues in Germany. Its findings could be shared with the FSC.

The next two speakers, each elected representatives, drew the Forum's attention to the importance of local and regional government as *intermediaries* in waste management discussions and decisions.

T. Carlsson, Mayor of Oskarshamn (Sweden), spoke of the learning process of a potential host community, giving insight on how multi-lateral partnerships have developed.

- The Oskarshamn experience illustrates the working of a national system for dialogue in which the disposal concept is reviewed every three years and in which the host municipality is given an explicit role.
- The municipality decided to adopt an active role in the dialogue. The alternative, a passive approach, was examined and rejected. This stance has gained heightened respect for the political system.
- An early start to the EIA process in this potential host community was accompanied by a clearly defined decision-making process, a commitment to openness and clarity by all parties, and economic support for competence-building in the municipality.
- *Each partner needs to have a clearly defined and well-communicated role both for the national dialogue and under the EIA framework:*
 - National government puts forward a clear policy and legal framework;
 - SKB proposes disposal methods and siting;
 - Safety authorities act as the « people's experts », available throughout the process;
 - Local stakeholders are qualified to represent and evaluate their current and future needs.

C. Bataille, Member of the French Parliament, spoke of the policy maker's role and his experience.

- *The present generation must take responsibility for the choices made, or left unmade.* The impact of unmade choices in site restoration is visible in e.g. mining regions.
- *Localities should receive economic resources upon entering the (potential) host community role.* Allocations to favour local development have been wrongly criticised as « immoral » or a source of pressure. There is no reason that participation in waste management, as in other industrial activities, should not generate prosperity.
- The messages given by the decision makers must be clear, and attention should be given to the use of terms: “burial” (enfouissement, in French) is not the same as “placing in an underground repository” (stockage souterrain).
- *It is clear that the debate on waste disposal is important to the debate on the future use of nuclear energy.*
- Regarding the experience of France, he indicated that:
 - Early nuclear power development decisions were taken without consultation. Radioactive waste disposal, and attendant siting needs, catalysed the requirement for transparency.
 - The 1991 Waste Act has the virtue of stating the rules of the game. These rules can be discussed or modified but cannot be ignored by any stakeholder. In particular, the Act establishes a set of principles, e.g. it requires that the waste of French origin should be dealt with in France and that a second underground laboratory should be built for the decision process to go forward. The Act also makes it clear that no solution is the preferred one at this stage for the long-lived waste and that the decision for or against a disposal site, or for postponing disposal, will be taken by Parliament.

P. Brown of Canada's Ministry for Natural Resources commented that a remarkable symmetry exists between the UK and the Canadian experience, in that both countries undertook an important R&D programme extending over decades, but no solution is yet identified and government decisions are pending. Brown presented the key concerns uncovered by an 8-year review of a deep geological disposal concept.

- The conclusions put forward by the review panel, based in part on input from public interveners, were that:
 - Today's science and knowledge can meet the challenge of building technically safe radioactive waste disposal facilities for spent fuel and high-level waste. Safety, however, must be viewed also from a social perspective.
 - A single choice of management is not acceptable *a priori*. Geologic disposal would be accepted only if it were compared to other alternatives.
 - There is scepticism that science can resolve radioactive waste disposal issues. The preferred concept should maximise the freedom of choice of future generations while minimising burdens. Also, a balance should be struck between passive and active controls of a disposal facility.
- The review panel did recognise that they could not poll the public. Public input was limited to a minority (a total of 500 participants in public hearings and about as many submissions). Lack of broader participation was probably due to the fact that no safety threat was perceived. This raises questions of *how to effectively involve stakeholders early in the programme.*

- Heightened public confidence requires heightened awareness that:
 - The proponent is competent;
 - The regulator looks after health, safety and the environment;
 - Social, cultural and ethical issues are addressed alongside science and technology.

Round Table Discussion

One theme of discussion centred on questions of political science. How can balance be found between national needs and local prerogatives? What kind of stand must be taken by central government to support the waste management process? What balance will be found between local autonomy to refuse a waste disposal facility and the inability of present, *de facto* host communities to rid themselves of unwanted spent fuel or wastes? Decision structures are very different from country to country. These could be compared, in order to understand how stakeholders and elected representation will become involved and take responsibility.

Local decision-makers are intermediaries in waste management dialogues. They can open up understanding, mobilisation and communication. Waste managers can trust communities to take up local problems and find solutions for them, as has been demonstrated in the field. Formal devolution in various nations means that more and more decisions will be taken on the local level. The FSC should address the present need of local decision-makers for clear, pertinent information on waste management.

The funding of various stakeholders is a point on which comparisons might be performed. In Sweden, the municipalities have secured funding for their process of competence building, which is recognition of the legitimacy of their work. In particular, Mayor Carlsson pointed out that opponent groups should work, and receive funding, through the local community.

There was agreement that policy can no longer be made, nor implemented, without active input and commitment by all stakeholders. The need for an active regulator committed to the government policy was reiterated. Part of the success of the Oskarshamn model is that the regulators are known personally by the community and appreciated for their role as people's experts.

An important issue is how to organise information, consultation and deliberation, e.g., under the EIA umbrella. General questions worth addressing are: How can stakeholders be stimulated to become active early in the process? What public consultation formats are available? In what contexts may they be used? Who should organise them? Who are stakeholders at different points in the decision process?

Trust and confidence in the regulator and implementer are key ingredients for progress to be made. Trust must be based on the clarification of roles, coupled with competent, honest and responsible behaviour by waste management partners. When trust is lost, it is very hard to build up again. The relationships between trust among stakeholders and confidence in the waste management process overall, will merit further study by the FSC.

Overall, the round table discussion of the inaugural presentations confirmed the interest of the five topics that would be dealt with subsequently in the workshop.

FSC First Workshop and Meeting

The FSC Meeting and Workshop addressed five major topics. Each topic was framed by two plenary talks and subsequently developed in working groups. Y. Le Bars, the workshop chairman, provided an introduction. An opening talk was delivered by C. Thegerström.

Opening session

Y. Le Bars summarised the inauguration day's discussions, and made additional points while describing the 5 topics identified for the workshop. He noted, for instance, that the absence today of an energy crisis has changed attitudes towards nuclear power and reduces the pressure for planning for the future. Rural environments are increasingly committed to their quality image, which may be spoilt by the presence of a waste repository. The impact of deregulation, the image that electricity providers have to give, the need for multiple sources of expertise, etc. were some of the other aspects that he evoked.

C. Thegerström discussed the SKB experience of over ten years of public dialogue: in siting the CLAB, for interim storage of spent fuel, the SFR, for disposal of L/ILW, and Äspö, the Hard Rock Characterisation Laboratory, and, in the context of site characterisation studies for spent fuel disposal. Regarding the latter, he reported on the relations with municipalities in the North and South of Sweden. The experience with the Northern municipalities showed that SKB gained trust simply by accepting the No vote of a community and leaving it. SKB is now receiving much visible support in 6 candidate sites in Southern Sweden.

He presented a pyramid of conditions for the implementation of a deep repository. The process is founded upon a statement by the national government of the need for a repository, and support and commitment to that policy. Roles and responsibilities must be clearly defined. On that foundation must then be laid a scientific and technical programme of demonstrated quality. The next component will be a transparent and fair siting process. On that basis local social trust may be developed. When that is achieved, concrete local benefits must be introduced. Only by fulfilling these hierarchical conditions will a repository be achieved.

Mr. Thegerström discussed a trend in siting activities towards greater complexity, producing greater demands on resources and time, and carrying a higher risk of delay or failure, but resulting in greater support in the end. He recommended that implementers be prepared for a long-winded effort, and made these concrete suggestions:

- "Have a project": a clear and understandable plan and concept for waste disposal. Communication should first focus on "why" rather than on "how".
- Be ready to have your project questioned. There must be room for possible change or improvement of the project.
- Put priority on listening to, and dialoguing, with individuals and small groups.
- Put priority on actions. Trust or distrust will mainly be based upon the judgement of the way an organization is behaving.
- Respect other opinions, anxiety and fears. People are themselves the experts on their own feelings and their own local conditions. They know what is of most importance to them and their neighbours.
- Demand respect in return. If you act in an open and fair way and with integrity you have the right to receive respect in return.

- Push forward and don't resign. The implementing organization must play the role of "engine" for a long and difficult decision process. To succeed one will need flexibility and firmness, patience, and the ability to adapt to the specific circumstances encountered during the process.

The discussion of this talk revealed that the present success of SKB rests on:

- The commitment of a regulator whose credentials are well respected. The regulator was to be commended because it also had its share of difficulties with the communities;
- A stable financing system managed by a special Board and depending on an approved R&D programme that is reviewed every third year;
- SKB creating its own identity vis-à-vis the nuclear utilities;
- The unswerving conviction of the government that it is SKB who has to carry out this management task, and ultimately;
- A clear division of institutional responsibilities.

Finally, it was observed that the earlier public decision, in Sweden, to phase out nuclear power is, to some extent, helpful, in that people who were favourable to the phase-out agree that they need to have a constructive attitude in managing the waste.

Topic One: The Changing Environment for Waste Management Organisations

D. Ipsen spoke about the changing modes of participation seen in the area of regional planning.

Communication across several fields of knowledge is a necessity and an issue in present day society. For instance, there are communication issues even in planning a playground, and it may well take a decade to implement one in a community. Siting of waste repositories is not unlike issues of regional and urban planning and it poses similar communication problems.

The regime regulating present day society is of relevance when considering how communication does or may take place. Several regimes are possible and were operating at some time or another in the past. One former regime ("fordism") was that of a hierarchically structured society, with strong consensus on values and respect for scientific and technical expertise. In the present regime, identified as "flexible", the social actors are situational and regional groups; production is characterised by information and organisation; pluralistic and subsidiary lifestyles are the norm; and the accumulation of wealth lies in global networks and in "producing the difference".

One communication difficulty derives from the fact that the *lebenswelt*, i.e., the level of self-organised knowledge and thinking that people have in their own control (the "normal" kind of thinking in everyday life) becomes more and more infiltrated by the social system of "politics", "economy", and "science". On the other hand, more scientific and professional skills do enrich the *lebenswelt*, so that knowledge and skill levels become more and more equivalent to those found in organisations. Additionally, the present technical opportunities make it possible that people very different from one another come in communication with each other. This allows the *lebenswelt* to take on more strategic weight in relationship to the formerly dominant areas of expertise in politics, economy, and science. At the same time, economic identification becomes important for the development of regions, as the present cultural and economic globalisation reinforces regionalisation as a basis for success in competition.

While trust is a sociologically key concept, a more pertinent concept for the present purpose is the need to enforce communication in designing the future. In other words, discussion of how we would

like to live in the next decade and longer is key to discussing developments in nuclear waste and nuclear energy. This implies that nuclear waste management will have to be integrated with discussions on the development of the quality of life of a region.

In a field project, Prof. Ipsen found that people can contribute very effectively to planning if they are allowed to participate continuously in small groups over a period of about one year. This collaboration of professional planners and citizens was termed "deep participation". Deep participation will be successful if one can find an agreement on the level of general values. This may be one important point also in handling nuclear waste.

A. Vári presented a conceptual framework to compare siting processes. This framework depicts competing social values that may be embodied in siting approaches. Flexibility competes with control, while an external focus competes with an internal focus. The resulting blends of values produce four main "types" of siting approaches: adaptable (flexible-external), goal-centred (control-external), data-based (control-internal), or participatory (flexible-internal) processes. The objectives of these four types differ as well: legitimacy, efficiency, accountability, and sustainability are sought, respectively.

The framework was applied to the analysis of L/ILW facility siting processes in the U.S. (five sites), Canada, France, the Netherlands, Sweden, Switzerland and Hungary. A shift is seen over time from a technical approach (control-internal: focus on data and accountability) to an individual-rights approach (flexible-internal: focus on participation and sustainability). When participation and individual rights are accommodated in the siting process, a further shift is then seen to seeking distributive equity and legitimacy.

All competing values cannot be satisfied at the same time. On the other hand, it must be observed that the major weaknesses of most siting efforts were low level of perceived legitimacy and limited public support. Dr. Vári lists eight factors that enhance legitimacy. One important aspect is that the goal of site selection should be to identify a licensable site with host community support, rather than trying to identify "the" optimal site.

In addressing the situation in Hungary, she made remarks that could have wide applicability. Namely, nearby communities to a siting locality are more likely to voice opposition and need to be won as well. While it is important that a waste Agency build trust, the latter is also based on a tailor-made project of compensation and incentive packages. Finally, lack of trust is an issue affecting society beyond waste disposal.

H. Sakuma chaired Working Group 1. **O. Kurki** (Posiva) made a presentation entitled "Why has geological disposal been so well accepted in Finland?". At the moment it appears that Posiva will obtain, during the winter of 2000-2001, the policy decision permission for a final deep disposal facility for spent nuclear fuel in the bedrock of Olkiluoto. The permission will make it possible to concentrate Posiva's investigations in Eurajoki, with an underground research laboratory built in Olkiluoto at a depth of 500 m. Posiva have recognized that in addition to meeting safety criteria, their activities over time must also meet all the criteria specified by the surrounding society. While such criteria may be hard to predict, it is possible with appropriate listening and monitoring to follow the development of stakeholder needs and adjust to them. Posiva strives in all its relations to be a credible, dynamic expert organisation. An incremental approach, learning by doing, and time were reconfirmed as important factors in developing acceptance for management offerings.

The working group then discussed the changing environment for waste management. Not only this environment but also the world at large is seen to be changing. Publics no longer have faith in the infallibility of authority and science. Technology is no longer perceived as the bright future. Those who

contested the old order are now in decision-making positions. Centralised decision has ceded to a stronger involvement of local authority. Top-down decision styles are rejected.

Development projects in general are rejected when stakeholders have not been actively involved in creating them and developed a sense of responsibility for them. Radioactive waste is not perceived to be a shared societal problem, and the priority assigned to resolving energy-related issues may be low today when economic and energy shortages are just a memory.

In this context, the technical side of waste management is no longer of unique importance: organisational ability to communicate and to adapt now moves into the foreground. The obligation to dialogue and to demonstrate to stakeholders that their input is taken into account raises the questions of who can take on the role of communicator, what skills and training are needed, which tools should be developed, what organisational changes are necessary. The FSC could well serve as a forum of exchange on these issues.

Implementers and regulators alike perceive the importance of role clarification, within the organisation and within the national waste management system, such that responsibilities are identified, transparent and assumed. Finally, local and regional officials move into place as potential mediators when the programme shifts into the site-specific phase. Again, the FSC might review the map of roles, and investigate the modes of function and engagement of local and regional government.

Finally, a world trend is seen for persons to prefer extended institutional control of a repository, rather than counting completely upon passive safety systems. This reflects a general preference to judge at any time amongst alternatives, rather than be obliged to “buy” or reject a total package. The FSC might study whether there is more potential for building a higher degree of public confidence when programme alternatives and/or options are kept available.

Topic Two: Trust and the Institutional Framework

J. Caddy presented the work of the OECD Public Management Service, or PUMA, on “Strengthening Government-Citizen Connections” which focuses on how bridges are built between government and citizens so that policies can be designed and implemented with wide public support. The policy makers in all sectors are confronted with the challenge of reaching out, informing and consulting citizens. At the same time, better-informed critics now surround governments, and it is more difficult than before to develop policy and achieve objectives. Overall, it can be said that there exists a generalized crisis in government-citizens relations, as witnessed by recent biotech management issues, including the acceptability of using genetically modified organisms.

A questionnaire study shows that most OECD Member countries had adopted Freedom of Information legislation guaranteeing citizen access to information by the 1980s, while most have also adopted sector-specific legislation granting citizens rights to information (e.g. environmental data, health data, and consumer protection). Many have adopted policies to make government information available on the Web. Mediators, ombudsmen or parliamentary commissioners are frequently appointed to represent citizen rights and to ensure implementation of various laws and policies dealing with government-citizen relations. The majority of laws and policies adopted by Member countries in support of consultation and citizen participation have occurred relatively recently, within the past 15 years, including many in the 1990s. While it is true that the amount of information provided to citizens by governments has grown significantly in OECD Member countries, opportunities for public consultation are still less widespread while the scope for public participation in achieving policy objectives remains relatively limited.

The potential for disappointment and frustration on the part of both governments and citizens during the formulation and implementation of sensitive policy decisions is high. It can be reduced by:

- clearly defining expectations, “rules of the game” and limitations of a given information or consultation exercise from the outset;
- using a ‘mix’ of different tools and approaches in the provision of information and opportunities for consultation in order to reach a sufficient range of stakeholders in a given policy-making or decision-making process;
- improving capacity for the evaluation of efforts to improve government-citizen connections.

It was felt that ongoing exchanges between the FSC and PUMA might be of value in order to benefit from this knowledge base on governance, e.g. with respect to defining “rules of the game” for consultation. In particular, in later working group discussion, Dr. Caddy raised similar issues to those voiced by other speakers who were experts in waste management. Namely: Even if governments try to undertake public consultations, relatively few members of the public participate; how much consultation is needed and at what stage of the decision-making process?; who is entitled to represent the public interest and what proxies may the public use?

R. Guillaumont described the different roles, actions and impacts associated with technical oversight bodies. On one hand such groups can be closely linked to specific organisations, and review their activities, as would a scientific council. At the other end of the spectrum, oversight bodies may have very broad competence, not only to review results but actually to define study actions. The oversight body might also have the authority to express its collective opinion upon the questions of society linked to waste management. Deliberations might be triggered only at the request of some other organisations, or on the contrary the group may enjoy complete autonomy in the definition of its scope. The independence of the members of any oversight body must be real and visible. Multidisciplinarity will be an asset, as might also be international membership. Such bodies can play a mediating role between scientists and engineers, and, public authorities and the general public. The existence of a technical oversight body has definite potential for increasing confidence in the overall waste management process.

D. Metlay chaired Working Group 2. **M. Aebersold** presented the results of Switzerland's Expert Group on Disposal Concepts for Radioactive Waste (EKRA). Its success in placing recommendations and in advancing the long-term waste management programme was attributed to e.g. the wide acceptance of the EKRA chairman, the competence, independence and commitment of EKRA members, the responsiveness of their recommendations to public concerns and social issue, and the openness and transparency of their work.

D. Metlay presented field studies related to trust in specific institutions in the USA. Discussion ensued upon the nature of trust, and its potential role in the siting and development of a repository. Trust implies that an individual is willing to give up a certain measure of control to another person, an institution, or a set of institutions. Trust must be earned, typically by verification through actions and meeting commitments. The actions of individuals in an organisation (including policy making) will affect the perception of the institution at large; interpersonal trust with agents of the institution can form a basis for regarding the institution with trust. Trust is much easier to lose than to win. Technical competence is necessary but insufficient in itself to earn trust. Other measurable components include caring, integrity, fairness, credibility, reliability and openness. If there is a failure on just one of those components, it may result in failure of the entire set, and in loss of trust. The parallel activities of an organisation involved in more than waste management must also be conducted in a trustworthy fashion to preserve overall trust.

Lack of trust may not necessarily be at the root of public rejection of a repository project: at issue rather may be unacceptable changes in lifestyle or other undesired impacts.

Waste retrievability and programme reversibility alleviate mistrust of technology and its implementation. Enhanced oversight by authorities and stakeholders constitutes a “defence in depth”, and the sharing of responsibility and control, as well as financial and other compensation, may work to build public confidence in the process.

The issues of trust were perceived to be an important area for future exploration by the Forum. The FSC should examine national differences in governance, which affect the ways in which stakeholders are brought into the debate and into decision-making. With reference to existing studies and projects on trust, a framework could be developed to systematically report experiences in the member countries, explicitly addressing systems of governance, social values, legislative, legal, economic and other constraints. Stakeholder interactions could be analysed to determine stages at which trust is particularly important, and a set of “best practices” could be later developed.

Topic Three: Stakeholders and the Public: Who Are They?

M. English observed that public participation opportunities for environmental risk decisions have expanded in recent year. These, however, fail to distinguish among different groups in the public, and perpetuate the division between decision-making agencies and citizens. These deficiencies have opened the door for stakeholder involvement.

Broadly speaking, four categories of stakeholders are found: “risk losers”, “risk gainers”, “risk perpetrators”, and “risk managers”. These stakeholders are likely to bring not only radically different perspectives to the decision process and its outcomes, but also different abilities to participate.

Diffuse and long-term risks represent the hardest case of all for stakeholder involvement. Both losers and gainers are not only numerous and scattered; most are not born yet. And while key present-day perpetrators and managers can sometimes, with difficulty, be identified and engaged in deliberations, the longevity of the risk means that their successors will inherit the consequences of past decisions without having had the opportunity to influence those decisions.

In considering diffuse, long-term environmental risks —especially those with large uncertainties and potentially grave consequences, such as those typified by high-level radioactive waste disposal — there is a need to move away from a stakeholder-centred model of environmental decision making and towards a model that

1. draws upon the concept of collaborative learning, and
2. emphasises the long-term common good.

Emphasis on the long-term common good calls upon people to think of themselves, not simply as self-interested stakeholders, but also as trustees for the well being of other people and the environment. The decision process should challenge prevailing knowledge and values without being adversarial. It should be deliberative and iterative, with incremental steps revisited as needed. And it should have as a goal a sustainable future for all, rather than focusing on satisfying the interests of stakeholders who happen to be present. This ideal is far easier to prescribe than to implement. Nevertheless, it should not be abandoned as an ideal.

D. Appel presented a detailed chronology of the Gorleben siting process, showing how great a gap there can be between a legal requirement for public participation, and effective stakeholder access and

input. A case analysis shows that in early stages of development of the German waste disposal concept (1960's-70's), public participation was nil and even scientific peer discussion was extremely limited.

Participation in deciding to investigate the Gorleben salt dome was formally limited to representatives of selected stakeholder groups: The decision on underground investigation was not open, and so participants had no actual decision latitude. Funding was provided for counter expertise, but this was not sufficient to prepare for the intensive discussion on the results of investigations. The perception of a gap between geological realities and expected outcomes of a safety analysis also contributed, at Gorleben, to loss of confidence. This distrust hit not only the politicians responsible for the decision but, to some extent, the scientific agencies and their representatives as well.

Mr. Appel drew the following lessons from the German experience:

- Credibility is based on confidence in the responsible institutions. The latter is dependent on long-term behaviour.
- It is very difficult, if not impossible, to heal early procedural mistakes affecting the credibility of the entire subsequent process. The only way may be to go back to a point before the mistake was committed.
- A comprehensive disposal strategy, related technical concepts and proven siting and assessment methodologies are needed. Changes in strategy, concepts and methodologies must be convincing and must be discussed in detail prior to implementation.
- Scientific arguments can be misused as tactical elements in politics. That may reduce not only the politicians' but also the site-selecting scientists' credibility.
- Before starting a licensing procedure the discussion about benefits/risks and justification of the project and its alternatives must be initiated. In all phases of the decision making process public participation is essential.

So far there is no approach, in Germany, to phase-related stakeholder and public participation during decision making on final disposal of radioactive wastes. The working group "Methodologies of Disposal Site Selection", therefore, will develop not only a procedure for site selection but also new approaches to public involvement in a stepwise decision making process.

S. Webster chaired the Working Group 3. **M. Westerlind** presented the current siting debate in Sweden from the perspective of the regulatory bodies.

The group found that the term "stakeholders" could signify different things to different people: it can mean someone with a vested interest or a preconceived view, or simply someone with a role to play in the process. This latter definition allows the regulator, as well as international organisations, to be considered stakeholders. However the designation of the regulator as a stakeholder is not acceptable in all countries.

It is relatively easy to define a list of stakeholders in the sense of persons or groups having a clear role or interest in the waste management process. The involvement of any group will vary over time and depend upon the stage in the process: the procedural step defines who the most relevant stakeholders will be. As an example, a Strategic Environmental Assessment (SEA) affects general "policies, plans and projects" and draws in national and/or regional government and, likely, NGOs. An Environmental Impact Assessment (EIA) in contrast bears upon a specific project proposal and implies increasing involvement of

local groups and the regulator. EIA is becoming the main legislative instrument assuring public involvement in general in the siting process, and as such should be encouraged and developed. It represents a way of treating radioactive waste siting issues on a par with other environmental projects of a controversial nature.

The Working Group concluded to a majority that the term stakeholder should be understood as somebody with a role to play in the process. The identification of stakeholder groups is less difficult than the definition of interactions among groups and their respective roles, responsibilities and rights. Stakeholder groups may not be characterised by unitary opinions or needs. Regarding future stakeholders, the opinion was that we can only do what we think is best for them, but there was recognition of the conflicting priorities of leaving a passively safe situation, or, leaving enhanced possibilities of intervention.

Topic Four: Is there a New Dynamic of Dialogue and Decision Making?

K. Andersson described the context surrounding technical or societal decisions like that of site selection for an underground repository:

- There is wide recognition that participation by citizens in decision processes is good for the quality of decisions and democracy as a whole.
- For this, it must be possible for the public to see how decisions are made, their factual basis and the underlying value arguments.
- The increasing complexity of today's society, the complexity of decision-making processes and the complexity of the underlying factual basis are all factors that work against transparency and participation.
- This complexity leads to restrictive framing and fragmentation of issues by stakeholders.
- Nuclear waste management, as one example, was early framed as an expert area, and value-laden issues have often been hidden in seemingly objective expert investigations.

Public participation is a way of ensuring that public values and ethical understandings are represented in decisions. It is justified in a political sense in that it lends stability and legitimacy to decisions, and the knowledge base is improved.

K. Andersson presented a framework, developed in the ongoing European Commission RISCOM project, for understanding transparency. To achieve transparency there must be procedures allowing decision-makers and the public to verify claims of truth, legitimacy and authenticity. Transparency also implies that the environment of implementers and other stakeholders be sufficiently demanding, and that critical questions be raised from different perspectives. Waste management schemes and programmes can be evaluated on their degree of transparency, of public involvement in decision-making, on manners of representing the public, and on the style of consensus-building.

T. Merceron recounted the Spring 2000 experience of the "Granite Mission", or how France tried to create a new phase of dialogue with citizens about radioactive waste management, and instead unleashed violent rejection. At this time, a second underground research facility is needed to advance the research commitment laid out in the Waste Act 1999. The aim of the Mission (composed of a prefect and two engineers, mandated by the Government) was not to convince people to accept a laboratory, but to inform local populations on the project in order to gather their opinions.

A number of special factors were seen in the context that greeted the three members of the Mission:

- Opinion in favour of nuclear power phase out is on the rise;
- A national coalition of small anti-nuclear or anti-repository groups has been formed, and makes active use of the internet;
- Sensitivity is particularly high on the potential for stigmatising a local area and its products through association with radioactive waste;
- The economic incentives offered as part of a laboratory package are ill perceived as “buy-offs”.

The extensive development, in France, of local decision making units—35 thousand communities—is unique in Europe and increases the difficulty of consulting and coming to consensus.

National opposition to the underground laboratories, including the Green party, organised protest meetings in parallel with scheduled Mission visits, with the result that the Mission was unable to gather opinion nor even conduct serene discussions with local populations. Elected officials from across the party spectrum registered strong protest. General and Regional Councils carried motions against the URL project. Moreover, hundreds of mayors within the 15 selected areas (involving 850 communities) joined the opposition to the URL. In early June, the government ordered the mission to halt its consultations.

Despite the national efforts to build up a complete and highly articulated waste management system, the Mission was able to report that many people appear to be unaware of its very existence. This experience suggests that a waste management system, and particularly the roles and engagement of each institution within it (including governmental and legislative engagement), must be clarified to citizens. ANDRA in particular, as part of the system, sees the need to clarify the understanding of the scientific part of France's program, and, to find new ways of creating a local dialogue. Inside the organisation, this may imply formalising an ethics of communication.

J. Kotra chaired the Working Group 4. She presented recent attempts by the U.S. Nuclear Regulatory Commission to encourage greater public involvement in the development of new regulations for the proposed repository at Yucca Mountain. Of particular importance is the capacity for the NRC to demonstrate to stakeholders that their input has been received and incorporated into policy. This has implied a shift in organisational culture, bringing with it specific new management tasks and training needs. **V. Vanhove** (ONDRA/NIRAS) presented Belgium's revised approach to siting a low- and intermediate-level waste facility. Key factors in the new approach are the clear identification and separation of ethical and technical choices, and the pursuit of partnerships with local municipalities. The extent of trust and reliance placed on the decisions of the participating communities is an outstanding feature of the program, and aroused the curiosity of the group. The impact upon the implementer was clear, as the Communication department of ONDRA/NIRAS is fostering organisation-wide dialogue on what it means “to dialogue”.

The new dynamic of dialogue and decision making were characterised in discussion as a shift from the traditional “decide, announce and defend” model, for which the focus was almost exclusively on technical content, to one of “engage, interact and cooperate” for which both technical content and quality of process are of comparable import to a constructive outcome.

The FSC may contribute to and support member programmes as they endeavour to rise to the challenges posed by the new dynamic of dialogue. Actions could include the development of a “tool kit” containing clear, concise, and robust information materials, and guidelines reflecting experience on effective ways of engaging dialogue on radioactive waste management. In preparation for stakeholder

exchanges, reflection could also be undertaken on the sensitive issues of consideration of the common good, the importance or role of retrievability, the value to the waste management process of a community veto to the decision-making process, etc.

The organisational adaptations implied by the obligation to dialogue can also be supported by the FSC, through identification and validation of e.g. training and R&D needs. Not only member organisations, but also the NEA itself might be “stretched” by a real openness to dialogue; the working group voiced the demand that a broader range of stakeholders be invited to future meetings of the Forum, or even included as members.

Topic Five: Are the Waste Management Institutions Set Up for Achieving Stakeholder Confidence Over Long Time Periods?

R. Espejo spoke of the structural requirements for the effective performance of waste management institutions, giving a structural interpretation of “transparency”. Transparency requires fostering, producing and maintaining dialogues and communications among those producing knowledge, those producing decisions, and the affected parties. The issues raised in these dialogues will refer not only to questions of technical efficiency, but also to questions of what is right and fair and whether decisions and their implementation reflect the societal view. Policy is in fact the outcome of a complex interaction of “meaning-making” units and their multiple spheres of influence. One strategy for enhancing organisational performance and managing the complexity of environmental issues is to render organisational units autonomous and responsible for “co-evolving” with the outside world. The only limit on this autonomy is the requirement to respect the cohesion of the larger unit within which a smaller unit is embedded; in all else, the image given of the “recursive organisation” is far distanced from e.g. the bureaucratic model of dependence on central authority, which results in inertia. In later working group discussion, Espejo elaborated on the concept of “stretching”. Pressure to adapt to the environment is normally provided by the market, but waste management organisations do not have competition. The critical demands by stakeholders provide a constructive tension, leading these organisations to examine assumptions and adapt. As the landscape of stakeholders becomes more complex, implementer teams are stretched more and more; these challenges are necessary to shape an effective organisation.

T. Eng chaired the Working Group 5. **D. Pawlowski** provided an overview of recent research on the issue of public acceptance of waste management. She identified a trustworthy and credible organisation as one that could also be described as open, innovative, flexible, responsive, and fair.

Each member of the Working Group then offered views on what would characterise an organisation capable of achieving stakeholder confidence over long time periods. Most input focused on the implementer, but it was agreed that many of the recommendations and observations are valid for other actors, the authorities in particular. Participant input could be organized into three main areas: organisational aspects, missions, and behaviour. Organisational features include independence, clarity of role position, public ownership, dedicated and sufficient funding, a non-profit status, structural learning capacity, an internal culture of “scepticism” allowing practices and beliefs to be reviewed, high levels of skill and competence in relevant areas, including stakeholder interface, strong internal relations and cohesion, an ethical chart or code of conduct, and a general “quality consciousness”.

Mission features implied in achieving long-term confidence include clear mandate and goals, a specified management plan, a grounded and articulated identity, a good operating record, and responsibility for the back end of the nuclear fuel cycle, including decommissioning.

Behavioural features were explored and defined, and include openness, transparency, honesty, consistency, willingness to be “stretched”, freedom from arrogance, recognition of limits, commitment to a

highly devoted and motivated staff, coherence with organisational goals, an active search for dialogue, an alert listening stance and caring attitude, proactive practices, emphasis on stakeholder interface, a policy of continuous improvement, use of allies and third party spokespersons, and a level of commitment comparable to that displayed by NGOs.

The FSC could pursue work on this topic by pursuing and refining the list generated. Two uses could be expected: development of a tool of direct use to member organisations for their internal purposes; review of items within the FSC to identify new topics for future research and deliberation.

Participants and Observers Impressions

Participants' comments

Comments were received from participants throughout the event. Some comments were formulated in later communications to the Secretariat.

In general the Forum was described as a positive and successful undertaking. One observer stated that the Forum represented a rare opportunity to create dialogue and exchange among different institutions and nationalities.

Participants of WG 1 shared the view that the presence of the FSC itself is a vital example of the "changing environment" of waste management institutions. Working Group Chairs reported the high interactivity of deliberations, and attributed that in part to the significant efforts of preparation undertaken and encouraged by the Secretariat. The Secretariat had solicited and obtained written summaries from all presenting participants, and circulated the case studies prepared for the parallel working groups. Working Group registrees received a prior list of fellow participants, and their Chairs invited them to make acquaintance by email. Response was high from all members, and the sense of prior acquaintance was reflected in the trust and openness observed during the course of the meeting.

The value of sharing knowledge stood out in plenary and workshop discussions. Participants welcomed the opportunity to compare experience and develop understanding of what can be exported to other contexts, and what cannot. Many participants said they had learned specific lessons that they would bring home to their organisations.

Participants clearly perceived the role the FSC could play in developing tool kits for dialogue, compiling "best practices" guidelines, and organising systematic analysis of country experience. The access offered to the knowledge bases of other OECD Directorates appeared particularly attractive.

The FSC can also legitimate the efforts made by individual member departments or organisations to address stakeholder confidence issues. This could facilitate the securing of consent and funding for internal training and development initiatives.

Critical comments bore on the transparency of the choice of topics. The topics had been developed by the RWMC in prior deliberations, but that perhaps had not been made sufficiently clear to all persons invited to participate in this first Meeting and Workshop (this was rectified in a plenary session). Some stated that they would evaluate future participation in the light of the direct pertinence of topics to current organisational concerns, and the degree of member involvement in selecting topics.

Finally, while it was recognised that the FSC represents an unusual and progressive initiative for the NEA, calls were heard to "stretch" the organisation even further. This might include "daring" to invite and include other stakeholders than those official member institutions currently involved. The name of the

Forum on Stakeholder Confidence itself was questioned and tabled for future consideration. The calls reflected the high degree to which participants took seriously the notions of dialogue, transparency, and openness, and the desire to align institutional behaviour with avowed goals.

The Forum will discuss and address these critical comments at its next meeting.

The shift in attitudes on decision-making over the last decade in the impressions of an outside observer

A social psychologist was in attendance and gave her impressions of the FSC workshop. These were influenced by her last experience of an OECD-NEA international workshop: that was the March 1992 meeting on "Public participation in the decision-making process in the nuclear field". At that time, according to her notes, presentations spoke of a number of legal mechanisms by which members of the public could seek to influence decisions. However, there appeared to be a great deal of regret in some quarters that public opinion did not limit its expression to those outlets. Democracy, one participant went so far as to suggest, is endangered when the organised vote is not the only accepted form of public input. There was scorn expressed for both journalists and politicians in their unruly pursuit of outlying objectives. All attendees at the 1992 workshop very probably did not share these opinions, but they could be openly expressed at that time without eliciting objection.

At the FSC workshop in 2000 the discourse and attitude of institutional attendees appeared to this observer to be very different. There was recognition that existing consultation mechanisms are probably insufficient or sometimes inadequate, and that it is a real challenge for organisations and individuals to find new manners of communicating and receiving input. Each attendee appeared to be ready to rise to that challenge and curious about opportunities to learn. Members seemed to agree that democracy includes an extensive system of players and that power is necessarily shared. They expressed interest in interfacing with local and regional actors, recognising that large projects are articulated around this decision level. They called for clarification of roles in decision-making and in implementation, in the expectation that the clarification will not only result in better decisions, but globally in societal learning about risk management. Generally, to the eyes of the observer, attendees seemed to embrace a broader, more realistic view of decision in society, far removed from the technocratic position seen at the beginning of the decade.

The presentations during the Forum often revealed that important strides have been made in remodelling modes of relation between implementers or regulators, and, other stakeholder groups. Some presentations were frank in recognising the discomfort of public rejection and the difficulty of revising organisational culture. To the mind of the observer, more detail could often have been given on how new forms of relationship and dialogue were created, including the multipartite negotiations that were certainly implied. The success stories, in other words, would be more informative if they gave better glimpses of issues and decisions confronted on the road to success.

Future Steps

The members of the FSC expressed general satisfaction on the outcome of the meeting. It was not given *a priori* that this would be a success. In particular, the initial goals of having the FSC members get to know one another have been met and a working relationship has been achieved. In addition, the wide breadth of expertise that was mustered at the workshop will now be available to the FSC.

With the success came also the realisation that high expectations are placed now on the FSC from both within and outside the NEA. The challenges that this poses will be taken on at the next meeting of the group in January 2001. The intervening months will be used to finalise the proceedings of the workshop for broad distribution outside the NEA, and to take stock of the lessons learnt and comments received in order to arrive at a *modus operandi* that takes into account the available resources and utilises to its best the

experience of the FSC members, the NEA member countries, and the external experts that have accompanied and will accompany the FSC in its endeavours. A document will also be prepared outlining the strategic areas of the FSC working programme over the next few years.

The NEA/RWMC Forum on Stakeholder Confidence – Overview of first meeting and workshop

Y. Le Bars, C. Pescatore, H. Riotte

Introduction

Any significant decisions regarding geologic disposal will need a comprehensive public review and a thorough involvement of all relevant concerned parties, such as waste generators, waste-management agencies, regulatory authorities, local communities, elected officials, etc. The participation of non-technical stakeholders in decision-making will become increasingly important as more countries move towards siting and the implementation of geologic repositories. Public perception and confidence is thus one of the strategic areas¹ where the NEA/RWMC intends to promote common understanding and further dialogue. The NEA strategic plan provides a broad framework for initiatives in this area.

At a broader level, trends towards a participatory democracy are more and more evident in OECD countries and the strengthening of public participation, transparency and accountability and, ultimately, policy effectiveness in Member countries constitute major areas of the work of the OECD. Within this wider context, the RWMC has taken up the challenges to better understand the needs of the broader segments of stakeholders and to provide a neutral forum where experience can be exchanged and analysed, and lessons can be drawn in stakeholder involvement and decision-making in radioactive waste disposal.

The RWMC Forum on Stakeholder Confidence (FSC), which met for the first time in August 2000, is charged to act as a centre for informed exchanges of opinion and experiences across institutional and non-institutional boundaries, and to distil the lessons that can be learnt. While it is recognised that the decision-making process and avenues for stakeholders' involvement differ from country to country, it is important to identify similarities and differences, understand the key concerns of various stakeholders, and document means to interact effectively. The Forum mandate is relatively broad and covers a period of three years, at which time the efficacy of the Forum will be assessed. The FSC is composed of representatives of national organisations with responsibility, overview and experience in the field of stakeholder confidence.

This paper provides an overview of the inauguration, first workshop and meeting of the FSC. The event took place over three days in August 2000 and saw the participation of 75 attendees from 14 countries and three international organisations. The participants had widely varied backgrounds, spanning both the technical and social sciences. Affiliations included universities, national academies, technical oversight bodies, safety authorities, implementing agencies, and advisory bodies to government. In addition, a mayor from Sweden and a parliamentarian from France were amongst the inauguration speakers.

During the three-day meeting, the world-wide experience in the field of stakeholder confidence and radioactive waste disposal was reviewed. The proceedings of the meeting are in press².

¹ *Strategic Areas in Radioactive Waste Management: The Viewpoint and Work Orientations of the NEA Radioactive Waste Management Committee*, NEA 1999.

² *Stakeholders and Waste Disposal*, NEA 2000.

The workshop

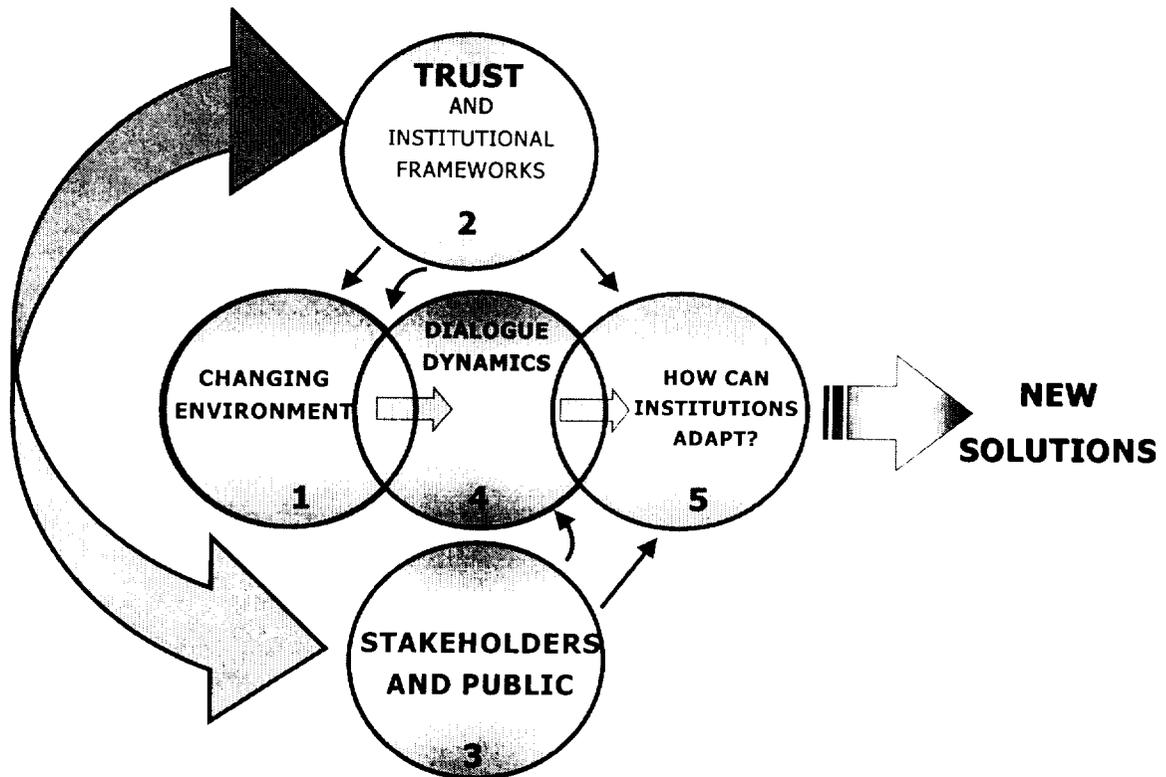
The workshop was inaugurated by five speakers presenting the viewpoints and experiences of implementers, regulators, policy specialists, and elected representatives at national and local level. A round table then took place, which was followed by a plenary address reviewing the experience of SKB, in Sweden. The workshop developed thereafter around five major topics:

1. The changing environment for waste management programmes
2. Trust and the institutional framework
3. Stakeholders and the public: who are they ?
4. Is there a new dynamics of dialogue and decision making ?
5. Are the waste management institutions set up for achieving stakeholder confidence over the long-term ?

Each topic was framed by two plenary talks, one reviewing the broader societal picture and the other reviewing specific field experience, and it was subsequently developed in working groups. This was therefore a highly interactive workshop.

During the workshop, the interrelationship amongst the five topics was analysed and it is captured in Fig. 1.

Fig. 1 *The five workshop topics and their interrelation*



It is a fact that the environment for decision making has been changing in an important way in society (Topic 1). In particular, technology is no longer being perceived as the bright future; those who contested the old order are now in decision-making positions; and centralised decision has ceded to a stronger involvement of local authority. Development projects in general are rejected when stakeholders have not been actively involved in creating them and developed a sense of responsibility for them.

The OECD countries are increasingly implementing forms of participatory democracy that will require new or enhanced forms of dialogue amongst all concerned parties (Topic 4). The new dynamics of dialogue and decision making were characterised in discussion as a shift from the traditional “decide, announce and defend” model, for which the focus was almost exclusively on technical content, to one of “engage, interact and co-operate” for which both technical content and quality of process are of comparable import to a constructive outcome. In this context, the technical side of waste management is no longer of unique importance; organisational ability to communicate and to adapt now moves into the foreground. The obligation to dialogue and to demonstrate to stakeholders that their input is taken into account raises the questions of who can take on the role of communicator, what skills and training are needed, which tools should be developed, and what organisational changes are necessary.

Institutions must be able to accommodate these changes in order to carry out the long-term projects for which they are responsible (Topic 5). The workshop offered views on what would characterise an organisation capable of achieving stakeholder confidence over long time periods. Participant input could be organised into three main areas: organisational aspects, missions, and behaviour. Organisational features include independence, clarity of role position, public ownership, dedicated and sufficient funding, a non-profit status, structural learning capacity, an internal culture of “scepticism” allowing practices and beliefs to be reviewed, high levels of skill and competence in relevant areas, including stakeholder interface, strong internal relations and cohesion, an ethical chart or code of conduct, and a general “quality consciousness”. Mission features implied in achieving long-term confidence include clear mandate and goals, a specified management plan, a grounded and articulated identity, a good operating record, and responsibility for the back end of the nuclear fuel cycle, including decommissioning. Behavioural features were explored and defined, and include openness, transparency, honesty, consistency, willingness to be “stretched”, freedom from arrogance, recognition of limits, commitment to a highly devoted and motivated staff, coherence with organisational goals, an active search for dialogue, an alert listening stance and caring attitude, proactive practices, emphasis on stakeholder interface, a policy of continuous improvement, use of allies and third-party spokespersons, and a level of commitment comparable to that displayed by NGOs.

Stakeholders and trust will play an important role all along the decision-making process. The term “stakeholder” (Topic 3) could signify different things to different people: it can mean someone with a vested interest or a preconceived view, or simply someone with a role to play in the process. This latter definition allows the regulator, as well as international organisations, to be considered stakeholders. However the designation of the regulator as a stakeholder is not necessarily acceptable in all countries. The workshop concluded to a majority that the term “stakeholder” should be understood as somebody with a role to play in the process. The identification of stakeholder groups is less difficult than the definition of interactions among groups and their respective roles, responsibilities and rights. Stakeholder groups may not be characterised by unitary opinions or needs. Stakeholders change with time. Regarding future stakeholders, the opinion was that we can only do what we think is best for

them, but there was recognition of the conflicting priorities of leaving a passively safe situation, or leaving enhanced possibilities of future intervention.

Trust needs to be given and to be won continually from stakeholders if the process is to go forward. (Topic 2). Trust implies that an individual is willing to give up a certain measure of control to another person, an institution, or a set of institutions. Trust must be earned, typically by verification through actions and meeting commitments. The actions of individuals in an organisation (including policy making) will affect the perception of the institution at large; interpersonal trust with agents of the institution can form a basis for regarding the institution with trust. Trust is much easier to lose than to win. Technical competence is necessary but insufficient in itself to earn trust. Other measurable components include caring, integrity, fairness, credibility, reliability and openness. If there is a failure on just one of those components, it may result in failure of the entire set, and in loss of trust. The parallel activities of an organisation involved in more than waste management must also be conducted in a trustworthy fashion to preserve overall trust.

Lack of trust may not necessarily be at the root of public rejection of a repository project: at issue rather may be unacceptable changes in lifestyle or other undesired impacts.

Waste retrievability and programme reversibility alleviate mistrust of technology and its implementation. Enhanced oversight by authorities and stakeholders constitutes a “defence in depth”, and the sharing of responsibility and control, as well as financial and other compensation, may work to build public confidence in the process.

Insights from practical experience in radioactive waste disposal projects

The workshop provided a wealth of information regarding the broader context in which decisions are taken in present-day society and it provided insights for how this may evolve and how institutions could adapt. Many presentations covered the actual experience of member countries disposal programmes and the lessons that were drawn. A bulletised list gives a broad overview of the practical lessons learnt:

- Management programmes have often included substantial public information and consultation efforts in their initial phases. However, these do not elicit massive response. Only when programmes move into a site-specific phase do non-technical stakeholders appear to take an active interest. It is thus a challenge to find ways of involving stakeholders early;
- Of special concern is the link between achieving a repository for radioactive waste and the future of nuclear power. This link – whatever it is in each country – must be spoken of openly and clarified. In particular, whilst it is clear that the debate on waste disposal is important to the debate on the future use of nuclear energy; it is also clear that a disposal solution is needed regardless of the future development of nuclear energy.
- A number of points must be demonstrable and clearly demonstrated to stakeholders:
 - The implementer is performing a service to society;
 - The waste generators provide finance under arrangements that provide value for money;
 - Financing arrangements are transparent;
 - Within its independent oversight role, the regulator is actively involved in assuring that the national policy on disposal is carried out in a safe manner;
 - Institutional arrangements are robust, and meant to survive changes in political orientation;

- Policy makers should review and communicate the assumptions, sources and consequences of policy choices. The same is true for regulators. The public needs/wants to participate early in the decision-making process, when the “rules of the game” are being defined. In particular, regulators must clarify the reasons and basis for changing regulations at later stages in repository development;
- Regulators must determine and then communicate to stakeholders where, when and how public and other stakeholder input can be accommodated. They must also communicate the bases of their decisions;
- Independence, competence and effectiveness are essential for public confidence in the regulator. The regulator’s role and responsibilities must thus be clearly defined, and separated from nuclear energy policy and promotion;
- At initial phases of repository development everyone is a stakeholder, albeit often unaware of that role. In later phases of a programme, concerned citizens in siting communities take on a more central role. Also, local and regional officials move into place as potential mediators when the programme shifts into the site-specific phase. A range of mechanisms for dialogue is needed to accommodate such shifts;
- The present generation must take responsibility for the choices made, or left unmade, e.g., in deciding, or less, to move forward in implementing a repository ;
- Localities should receive economic resources upon entering the (potential) host community role. Allocations to favour local development have been wrongly criticised as “immoral” or a source of pressure. There is no reason that participation in waste management, as in other industrial activities, should not generate prosperity;
- The messages given by the decision makers must be clear.

Conclusions

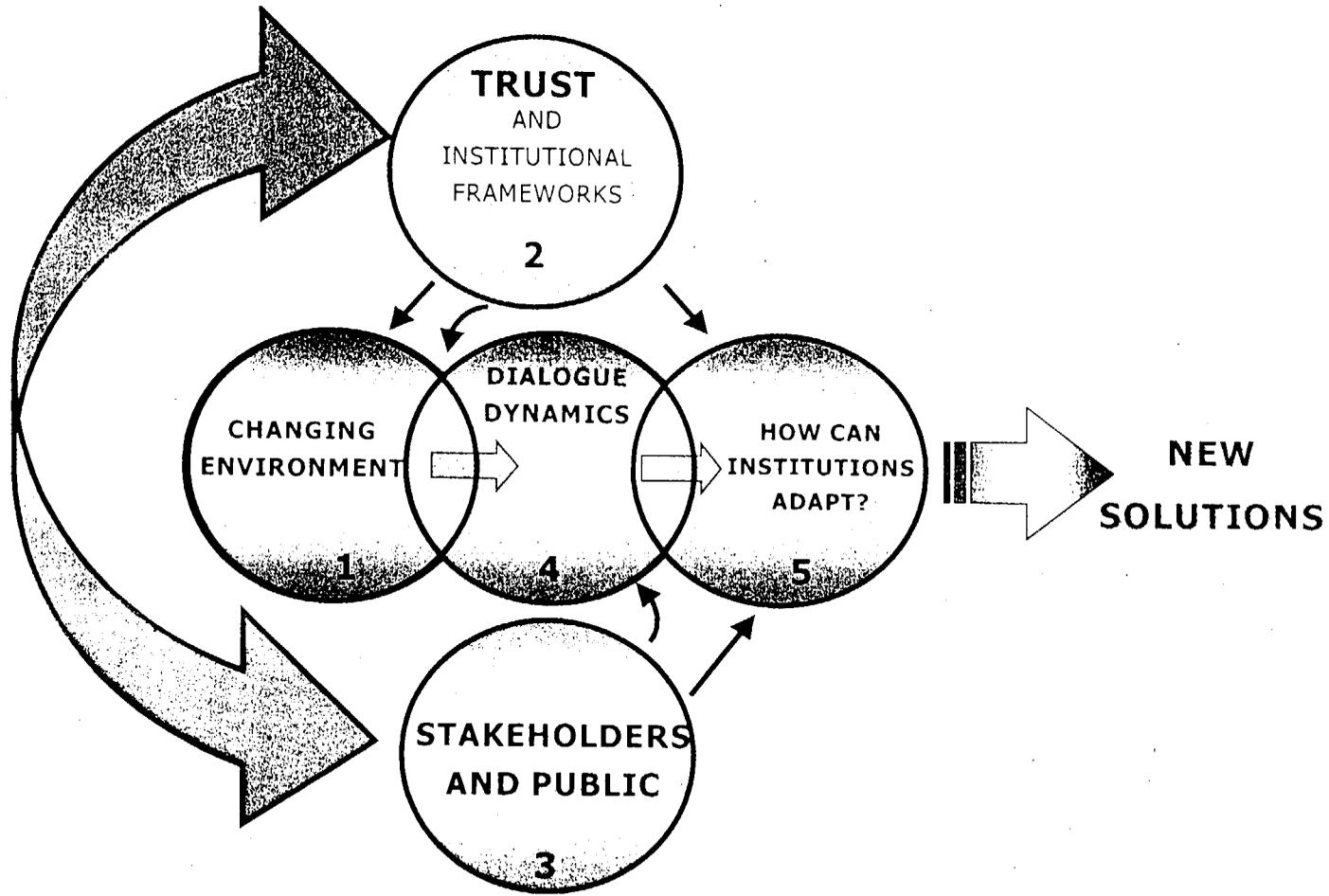
Development projects in general are rejected when stakeholders have not been actively involved in creating them and developed a sense of responsibility for them. Radioactive waste is not perceived to be a shared societal problem, and the priority assigned to resolving energy-related issues may be low today when economic and energy shortages are just a memory.

In this context, the technical side of waste management is no longer of unique importance; organisational ability to communicate and to adapt now moves into the foreground. The obligation to dialogue and to demonstrate to stakeholders that their input is taken into account raises the questions of who can take on the role of communicator, what skills and training are needed, which tools should be developed, and what organisational changes are necessary.

Implementers and regulators alike perceive the importance of role clarification, within the organisation and within the national waste-management system, such that responsibilities are identified, transparent and taken on. Finally, local and regional officials move into place as potential mediators when the programme shifts into the site-specific phase.

FSC will act as a forum for reviewing the map of roles, the modes of function and engagement of stakeholders. An important role will be to provide a neutral ground where the exchange of experience can be achieved, lessons can be learnt for future improvements in waste management programmes, and mutual understanding is promoted across both institutional and non-institutional boundaries. The FSC is the sole forum of this type world-wide.

Fig. 1 The five workshop topics and their interrelation



ENVIRONMENT:

"Culture of Skepticism"

Centralized
Decision making



Greater Role of Local
and Regional Authorities

Exclusive
Technical focus



Technical in Broader Context
(Social, Ethical, Process)

Monologue



Two (or more) - way Commun.

Institutional
Accountability



Broader, Public
Accountability

"Decide, Announce, Defend"



Engage, Interact,
Cooperate ②

TRUST:

"Easy to Lose; Very Hard to Regain"

- MUST BE EARNED
- REQUIRES LONG-TERM INVESTMENT
- CLEAR, TIMELY, ACCURATE INFORMATION IS ESSENTIAL
- OPEN PROCESS, RESPONSIVE TO INPUT
- ACTIONS MUST MATCH COMMUNICATIONS

PLAYERS:

"Inclusivity"

Many, more diverse



Distributed power
(power sharing?)



Broader array
of expertise



Few

Concentrated
power

Technical
professionals

ADAPTIVE STRATEGY:

"Trust, But Verify"

- CLEAR ROLES AND RESPONSIBILITIES

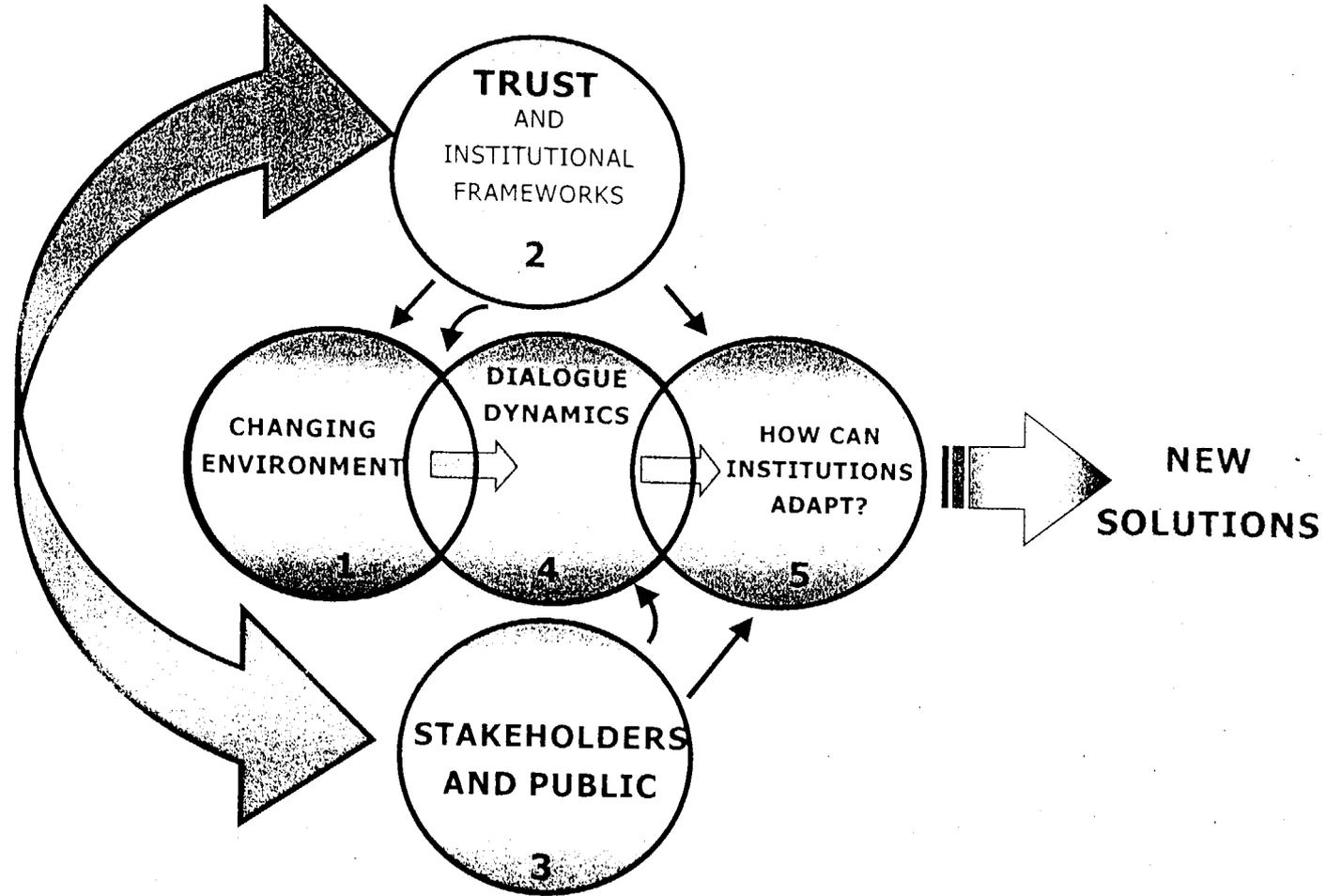
- VISIBLE PROCESS

- STANDARD SETTINGS
- TECHNICAL ANALYSES
- OVERSIGHT
- DECISION MAKING

- ABILITY TO RESPOND / EVOLVE

- FEEDBACK MECHANISMS

Fig. 1 The five workshop topics and their interrelation



ENGAGE

INTERACT

COOPERATE

Public Outreach

Making Technical and Policy Issues Understandable



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1

Goals

- Improve common understanding of technical and policy topics
- Enable a more meaningful dialogue
- Explain, not persuade

2

Techniques

- Clear messages
- Plain language
- Apt visuals
- Prepared presenters
 - anticipate questions
 - training

3

Techniques, *cont.*

- Multi-faceted, layered approach
 - posters
 - brochures
 - web access
 - technical and programmatic experts

4

HLW Public Outreach

Concept Example

- Performance Assessment
 - prominent role in regulation
 - part of safety case
 - controversial
 - misunderstood
 - possible legal challenges

5

What is Performance Assessment?

- Systematic analysis of what could happen at a repository
- One of many NRC safety requirements

6

- Attachment 4 -

What is assessed?

- What can happen?
- How likely is it?
- What can result?

7

Why use it?

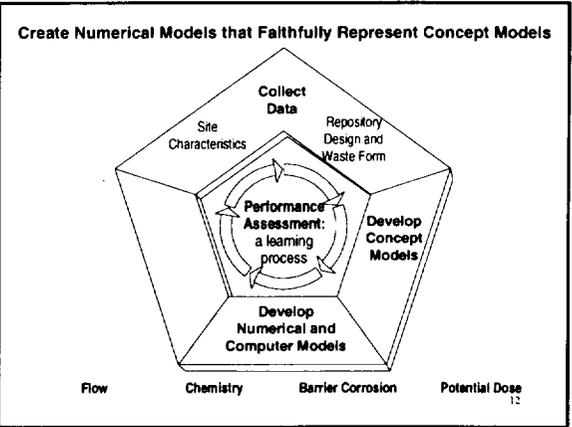
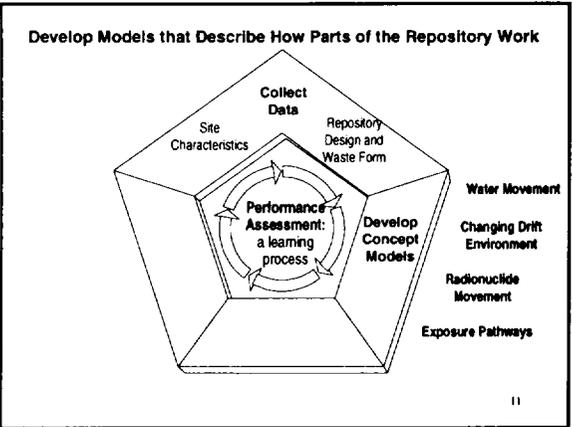
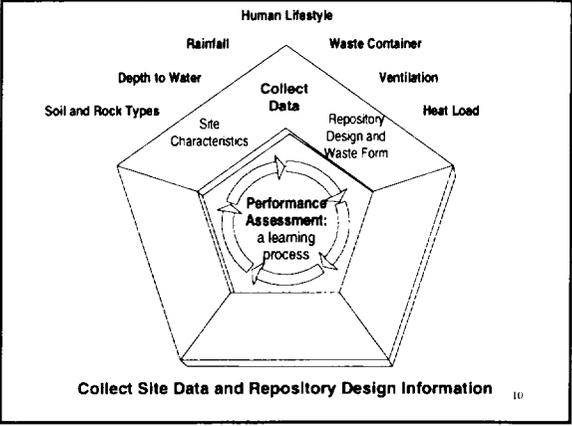
- Complex system
- Systematic way to evaluate data
- Internationally accepted approach

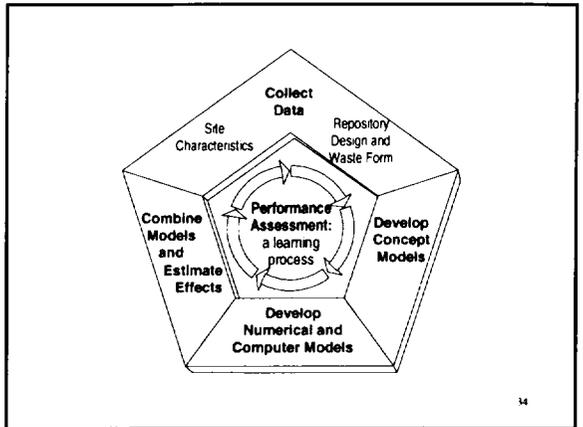
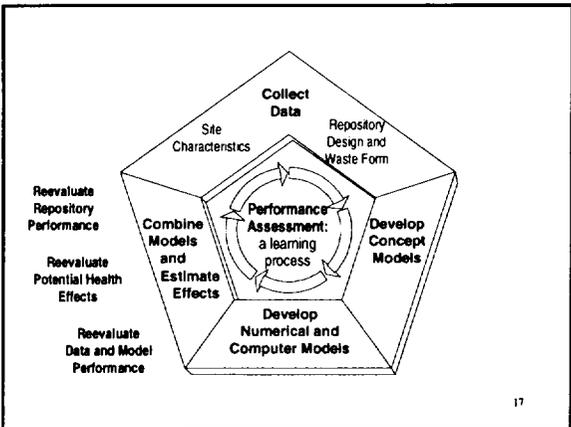
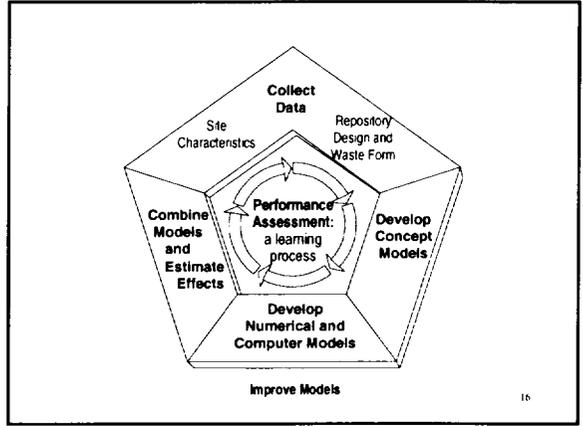
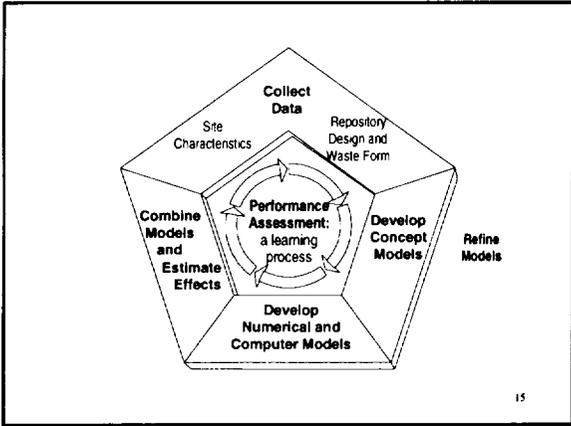
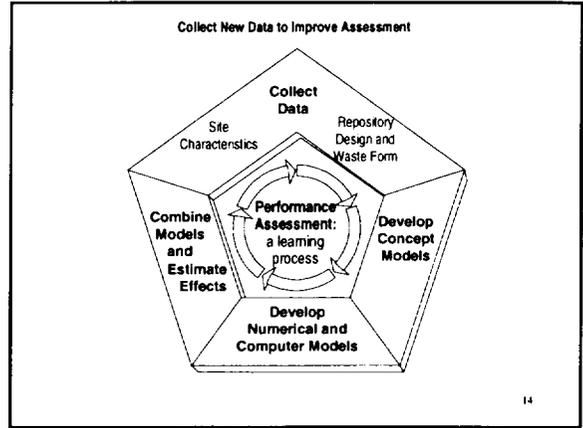
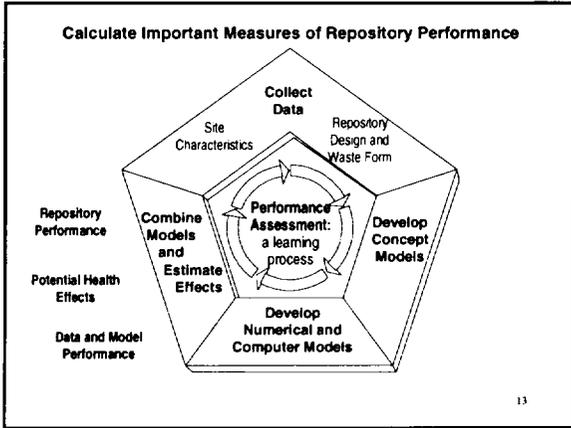
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How is it conducted?

- Collect data
- Develop scientific models
- Develop computer code
- Analyze results

9





NRC would require DOE's Performance Assessment to

- Provide site and design data
- Describe barriers that isolate waste
- Evaluate features, events, and processes that affect safety
- Provide technical basis for models and inputs
- Account for variability and uncertainty
- Evaluate results from alternative models

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Performance Assessment: Part of Evaluating the Safety of a Proposed Repository at Yucca Mountain, Nevada

What is Performance Assessment?

- Systemic analysis of what could happen at a repository
- One of many NRC safety requirements

What is assessed?

- What can happen?
- How likely is it?
- What can result?

Why use it?

- Complex system
- Systematic way to evaluate site
- Internationally accepted approach

How is it conducted?

- Collect data
- Develop scientific models
- Develop computer code
- Analyze results

NRC would require DOE's Performance Assessment to

- Provide site and design data
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- Evaluate features, events, and processes that affect safety

- Provide technical basis for models and inputs
- Account for variability and uncertainty
- Evaluate results from alternative models

Performance Assessment

This document provides information on the performance assessment process for the proposed Yucca Mountain repository. It describes the purpose, scope, and key components of the assessment, including data collection, model development, and analysis. The assessment is a critical part of the safety evaluation required by the NRC for the repository's licensing.

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A Public Outreach Example
Geological Society of America Annual Meeting
November 2000

- Opportunity: Exhibit at Technical Conference
- Audience
 - technical professionals
 - local educators
 - local politicians
- Materials matched to audience

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A Public Outreach Example
Preparing the Exhibit

- Messages:
 - NRC's independent role at Yucca Mountain
 - performance assessment
- Preparations:
 - posters, fact sheets, handouts
 - NRC technical publications
 - website
 - media releases and interviews
 - training

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NRC's PA Exhibit
Geological Society of America
November 2000

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Outreach Material Development

Other Potential Topics

- Site investigation
- Site characterization
- Dose modeling
- Environmental impacts
- Regulations
- Licensing process
- Transportation

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Outreach Material Development

Questions Worth Asking

- Stated messages conveyed effectively?
 - regulators role
 - use of performance assessment
- Core messages reinforced?
 - primacy of health and safety protection
 - independent oversight
 - fair, objective process
- Means for followup and feedback?

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