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**NUCLEAR ENERGY AGENCY  
RADIOACTIVE WASTE MANAGEMENT COMMITTEE**

**Cancels & replaces the same document of 16 March 2010**

**Forum on Stakeholder Confidence (FSC)**

**FSC Phase-3 Programme of Work (2010 and beyond)**

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**TABLE OF CONTENTS**

INTRODUCTION..... 3

MODUS OPERANDI..... 4

FSC PHASE-3 PROGRAMME OF WORK: MAIN INVESTIGATION THEMES..... 6

1. The Link between Research, Development & Demonstration (RD&D) and Stakeholder Confidence.....7

2. Changing Dynamics of Interaction among RWM Institutions and Stakeholder Confidence..... 10

3. Media, Internal and External Communication, and Stakeholder Confidence..... 13

4. Tools and Processes to Help Society Prepare and Manage Decisions (e.g., about Technology, Sites) through Stakeholder Involvement..... 15

5. Increasing the Value of Waste Management Facilities to Local Communities..... 18

6. The Symbolic Dimension.....20

7. FSC Knowledge Consolidation and Transfer.....22

## INTRODUCTION

**The main role and function of the FSC are as follows:**

- To identify specific issues of interest on which stakeholders can learn from one another and provide a platform for discussing those issues in an atmosphere of mutual learning and trust.
- To allow members to generate, consolidate, and transfer knowledge, and in so doing, improve themselves as professionals in the radioactive waste management field and better contribute to the skill base of their home institution.
- To provide timely, factual proceedings of the exchanges and dialogues that will be organised by the FSC. This factual information is meant to provide a valuable record that can be used by a wide spectrum of stakeholders and decision-makers.<sup>1</sup>
- To distil in a concise form the lessons learnt and provide a fund of information accessible to policy makers and other interested parties in the NEA Member countries.
- To investigate and catalogue specific tools that contribute to effective interactions among stakeholders in radioactive waste management.

The objective is more to develop a shared culture than to transfer experience from one country to another. National and organisational values are different and each case needs a specific well-suited approach.

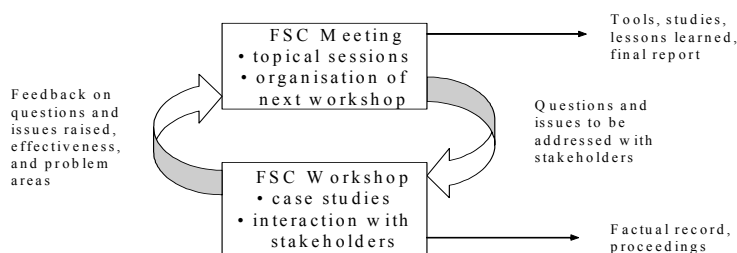
Meeting these expectations requires a specific Modus operandi and detailed Programme of Work, presented below.

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1. To this effect the FSC also maintains a database of contacts to whom information on the FSC is provided regularly.

## MODUS OPERANDI

Regular meetings of the FSC alternate with workshops held in national contexts with the additional participation of civil society. The relationship between FSC meetings and workshops is represented graphically in *Figure 1* and is described hereafter.



**Figure 1** Relationship between FSC regular meetings and workshops

The regular FSC meetings take place mostly in the Paris area, where the OECD and the NEA Headquarters are located. These are meant for information exchange and for focussed discussion of specific topics. At FSC meetings:

1. Information is exchanged on stakeholder-related activities in NEA member countries.
2. Strategic discussions and topical sessions are organised. These are conducted with experts and with specific groups of stakeholders or stakeholders' representatives.
3. Mandate may be given to subgroups to carry out specific actions/studies for later submission to and approval by the FSC.
4. The programme of the next national workshop is broadly defined.
5. Reports from workshops and subgroups are discussed.

The workshops in a national context serve as a neutral ground for discussion, dialogue, and advancement of knowledge. FSC members, and the stakeholder delegates they invite to accompany them, learn about the host country waste management programme and act as informal "peer reviewers", reflecting their own experience. At these workshops:

1. Opportunity is created for the FSC to view the inner workings of waste-management programmes, the methods they have employed for stakeholder interactions, the successes and failures they have had, and to hear directly from involved stakeholders their own views about the methods by which they were involved in the decision-making.
2. Opportunity is created for the national and local stakeholders of the host country to interact and exchange views with participants from other countries.
3. Topics of specific interest are dealt with in depth, taking advantage of the participation of a wide range of expertise and representation beyond the traditional technical specialists.
4. Specific assessments and documentation under preparation by the FSC may be discussed with interested stakeholders. These include: documents reflecting the lessons learnt from feedback

and experience; tools (techniques, processes, procedures, etc.) that can help support dialogue; methods to help organisations better fulfil their role; etc.

During phase-3, some new meeting formulas may be explored:

- Thematic Workshop or “Super Topical Session” – As an alternative to the yearly national workshop, when a host venue cannot be arranged, or in planned alternation. A 2 to 2 1/2-day workshop could be held in Paris/Issy going into depth on a given theme, with expert and stakeholder speakers and roundtable discussions. Possibly such a “learning place” could be organised around issues addressed to the FSC by stakeholders.
- For the 10th anniversary of the FSC (2010), an open event is planned (concurrently with FSC-11, in Sept. 2010). A dialogue format is chosen. Two FSC themes are selected. They are addressed by local stakeholders who share their experience relevant to the theme, followed by a short presentation of FSC work, and then by plenary discussion. Furthermore, “alumni” of past national workshops/community visits (institutional and civil society stakeholders) will be consulted before the event via questionnaire to learn about the meaning and impact of the workshops, and during the event a panel will present these findings. Members may invite alumni as presenters or as participants.
- Country updates will mirror the structure of the PoW and provide information to support Topical Sessions, surveys and studies. FSC members are asked to prepare their country update reports accordingly: a tailored template with target questions is provided before each regular meeting. Designated TS rapporteurs summarize their input.
- Finally, as evidenced by Phase-2 and Phase-3 cooperation with the Working Party on Dismantling and Decommissioning (WPDD) and the Integration Group for the Safety Case for Disposal (IGSC), the FSC is ready to provide both feedback and a discussion arena to other NEA working parties and committees as much as practically achievable. This will continue to be carried out in a considered manner under RWMC direction.
  - The FSC-10 agreed to make input as appropriate to the RWMC “Reversibility and Retrievability” project, including possible participation in the Reims conference (Dec. 2010).
  - The RWMC Bureau will submit a paper to the next International Conference on Geological Repositories ICGR-2011 to be held in Japan, Fall 2011 (draft deadline March 2011). The paper should fit in with the conference title “*National Commitment – Regional/Local Confidence*”. Several FSC publications and themes and topics are appropriate for inclusion: *Learning and Adapting, Partnering, Fostering a Durable Relationship*, Regional Elected Authorities... See discussion under Theme 4 and Theme 5.

## **FSC PHASE-3 PROGRAMME OF WORK: MAIN INVESTIGATION THEMES**

FSC activities allways build upon the knowledge and reflection generated in meetings and workshops. Five main themes emerged from the FSC Phase-1 (2000-2003) as central for Phase-2 investigations. By common agreement at the 8<sup>th</sup> Regular Meeting of the FSC (June 2007), Phase-3 was undertaken in 2008. It is organized around the same five themes, with two additional transversal themes. All were elaborated in the course of a Brainstorming Workshop (December 2007) benefiting from the input and participation of FSC members, members of other NEA working parties, institutional and local stakeholder representatives, and academic experts<sup>2,3</sup>. The current themes are:

1. *The link between technical research, development and demonstration (RD & D) and stakeholder confidence*
2. *Changing dynamics of interaction among RWM institutions and stakeholder confidence*
3. *Media, internal and external communication, and stakeholder confidence*
4. *Tools and processes to help society prepare and manage decisions (e.g., about technology, sites) through stakeholder involvement*
5. *Increasing the value of waste management facilities to local communities*

Transversal to each of the topical themes above are the following:

6. *The symbolic dimension*
7. *FSC knowledge consolidation and transfer*

The proposed programme of work — or set of options — for each theme is discussed below.

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<sup>2</sup> The present revision of the FSC Programme of Work draws on the summary output of this meeting, and has been updated periodically through Core Group and Secretariat interaction.

<sup>3</sup> Note that many statements in this PoW can be referenced to FSC Phase-1 and -2 publications. To streamline the present document, these are not cited.

## 1. The Link between Research, Development & Demonstration (RD&D) and Stakeholder Confidence

In Phase-1 it was observed that decision-making should be performed through stepwise, iterative processes, providing the flexibility to adapt to contextual changes, including new research findings and technological developments. It was recognised as well that the R&D technical community are also stakeholders in the RWM processes, and should play a key role by providing balanced and qualified input, and encouraging informed and comparative judgement. Further, active participation in, and/or monitoring of ongoing (inter)national R&D are viewed by stakeholders as providing important information for decision making relating to the development of national RWM strategy and for the safety case for operations and disposal. Indeed, Phase-2 workshops gave insight here. The FSC learned that Hungarian local stakeholders requested and will receive training in order to participate in the control of waste packages arriving for repository storage. In Belgium, local partnerships initiated detailed technical studies to inform siting decisions. It is seen that in order to respond both to technical and social imperatives, national waste management programmes are incorporating in their projects demonstration phases to show how a facility will develop and operate.

In Phase-3, FSC members continue to assign high priority to the RD&D theme. First the focus was placed upon the topic of **analogues**. Regulators need a technical demonstration to aid in evaluating the safety case. Local stakeholders appreciate the opportunity to visualise technological arrangements. In both case, demonstration adds to confidence in the feasibility of solutions. Some believe there is an important role for analogues in communication with stakeholders, if handled with integrity. However, analogues are recognized to be context-specific and influenced by cultural attitudes, and their demonstration value may therefore fluctuate over time. Natural analogues are appropriate only for certain elements of a disposal project, where ideas in natural science need to be illuminated. After the Phase-3 workshop on natural analogues, future work could thus concentrate on demonstration activities.

Regarding “social” analogues, we can look at parallels in human affairs where complex decisions were made that would engage many generations, or where efforts to preserve memory were made. The topic of **memory** is one that civil society stakeholders have singled out and it is increasingly of interest to the FSC (see also Theme 5). The RWMC has initiated a project on this topic to which the FSC may contribute.

Another major focus under Theme 1 is **reversibility & retrievability**, in their relation to stakeholder confidence. Increasingly stakeholders of all types want to talk about these tools, in the context of ensuring safety and regarding how society will deal with new technologies as they develop. However, the two concepts are not well-defined and different stakeholders have varying rationales and expectations in referring to them. The FSC does not propose to give a technical operationalization for these concepts, but to explore, within the Reversibility and Retrievability (R&R) project of the RWMC, how communicating about this high-profile topic can affect stakeholder confidence.

Other themes of interest include regulatory research and review of safety cases, and the effect upon stakeholder confidence of events that take place in other countries.

*Background materials* A large NEA body of information and activities (IGSC, RWMC, the new R&R project, the RWMC recent collective statement on geological disposal); the lessons of RISCOP II; the FSC workshops, in particular the German, Belgian, Hungarian and French ones.

*Initiating activity and publication* Topical Session at FSC-6 (June 2005) on “The Link Between RD&D and Stakeholder Confidence in the Field of Long-Term RWM”.  
<http://www.nea.fr/html/rwm/docs/2006/rwm-fsc2006-4.pdf>

*Phase-2 activities* Topical session organised with input from IGSC at FSC-8 (June 2007) on "The Specific Aspect of Long-term Safety" [NEA/RWM/FSC(2008)2]

*Phase-3 follow-up* A topical session was organised on "Use of Analogues for Building Confidence in Safety" at FSC-9 (June 2008). [http://www.nea.fr/html/rwm/NEA\\_RWM\\_FSC\\_2008\\_3\\_ANALOGUES\\_OLIS.pdf](http://www.nea.fr/html/rwm/NEA_RWM_FSC_2008_3_ANALOGUES_OLIS.pdf). Most of the presentations focused on the use of natural analogues.

Demonstration facilities: how organisations are using them, how these bring value to the community (link with Theme 5), how stakeholders are responding to them in terms of confidence. A topical session may possibly be organised in 2010.

R&R (as well as the issue of memory) were taken up at the France Workshop & Community Visit (Bar-le-Duc, 2009). The Round table report in the Workshop Proceedings contains a detailed list of stakeholder definitions and attitudes to R&R. Progress on the topic was discussed at FSC-10 (September 2009). In principle the FSC may contribute a presentation to the Reims International Conference in December 2010.

*Coordination with other groups*

This general theme is of high interest to the NEA Regulators' Forum and the IGSC.

FSC Core Group members attended the Dec. 2009 meeting of the R&R group and contributed feedback from FSC-10 (the multi-stakeholder development process of the "R-Scale" was highlighted by the FSC as good practice). The FSC could help review the discussion documents to be released by the R&R project and participate in this project's meeting in June 2010 and in the international Reims conference in December 2010.

*The symbolic dimension*

The value-laden message today, one which may be at the basis of demands for reversibility and retrievability, is that we must not abandon something that poses danger. During the 30 last years, the overall approach of the implementers has evolved toward that of responsible managers taking care of the waste in the environment, for the safety of the public. Waste management becomes a high scientific and high-technology skill, aiming not only to develop a solution for today but also addressing needs of future generations. This implies that physical behaviour of the disposal facility be well understood, that a strong monitoring effort be made, and that record keeping and memory preservation be set up in relation with the design and the safety concepts.

The safety case must thus address those questions in order to provide to stakeholders and the public convincing evidence of the level of understanding and control, and to ensure that no question remains without a well-founded answer.

*Knowledge transfer*

Flyers on the FSC findings in this area should be considered; topical session at FSC-10 on 10-year of the FSC

*Responsible FSC Member or Lead Organisation* Jo-Ann Facella and Jay Redgrove



*Examples of questions:*

- How is science perceived and how can science interact with the public to increase confidence in RWM decision making processes?
- How can transparency and traceability of R&D be assured and what are their limits?
- Are there specific areas of focus that citizens would like to see in R&D?
- How can better communication of existing R&D help increase confidence in studies underway?
- How can the competing requirements of adaptability to future technical developments and long-term safety be balanced?
- What actions are being taken to build confidence in science e.g. regulatory scrutiny, peer review etc.?

*Long-term safety*

- What is 'long-term passive safety'? How can technical and subjective elements be brought together? How to explain passive safety to the lay public?
- What is the link between safety and several degrees (or gradual removals) of controls?
- Can optimisation of concepts, including in regulation, be achieved with the help of the local stakeholders?
- What safety guarantees are requested/are possible in the context of facility siting?
- How do developments in one country influence safety case perceptions/regulatory research/review of safety cases in another country?

*Retrievability and reversibility*

- How can stakeholders participate in reversibility decisions (defining criteria, assessing situations, making the decision)?
- How are countries progressing with creating opportunities for local stakeholder participation in monitoring?

*Uncertainty/certainty, or Doubt/confidence?*

- Science is based on doubt, not certainty; decision-making is based on confidence, never on certainty. Confidence and doubt are the two complementary concepts that should be communicated, rather than uncertainty and certainty. How do the experts communicate confidence and doubt? How can they credibly perform a confidence analysis of their approach and results of their work, and how can they communicate it?
- In passing it may be observed that the distinguishing feature of a safety case is a "confidence statement" that places the results of the study in perspective vis-à-vis future developments and existing uncertainty/doubt. How is a confidence statement to be assembled?
- How to communication the method of "expert elicitation" as a confidence-building measure, appropriate to organise expert opinion in controversial areas?

## 2. Changing Dynamics of Interaction among RWM Institutions and Stakeholder Confidence

The issue of cultural and organisational change has been central for the FSC since its inception. The first workshop (August 2000) identified the most important organisational, mission and behavioural features characterising an organisation capable of achieving stakeholder confidence over long time periods. A joint paper was published with the Regulators' Forum on the Evolving Role and Image of these actors. In Phase-1, the FSC explored through case studies how stakeholders' views have been taken into consideration and how they have influenced decisions and organisational practices. In Phase-2, a questionnaire-survey collected detailed information on how RWM institutions have had to adapt and adjust to new demands from their environment. This information was illuminated by organisational theory such as that developed in business schools.

In Phase-3, the *relationship between organisations* has been identified as an important issue. It is the interaction between regulators and implementers that is of particular interest, with the aim of better understanding (i) the roles and responsibilities of each in contributing to stakeholder confidence, (ii) how interactions might best be managed and (iii) how each organization should perform to be both credible and independent. Thus, we believe that it is useful to focus on the concept of *transparency* and its significance/implication for the relationship between different organizations and stakeholder confidence. An hypothesis is: Whatever the relationship between implementers and regulators, it needs to be transparent in order for their organizations to achieve stakeholder confidence.

One definition that can be offered for “transparency” is: seeking to reveal, in a non adversarial manner, the values and assumptions present behind the arguments or activities of each type of stakeholder. Transparency, however, is not an easily defined concept and the definition may differ both between RWM institutions within the same country and between countries. A general aim of Theme 2 in 2010 is to clarify the concept of transparency, and the significance of transparency in the relationships between organizations as well as for stakeholder confidence. This clarification might be carried out by means of a questionnaire survey, addressed to FSC members and also to outside organisations.

*Initiating activity* Topical Session at FSC-5, Topical Session on “Addressing Issues Raised by Stakeholders: Impacts on Process, Content and Behaviour in Waste Organisations”  
NEA/RWM/FSC(2004)8  
<http://www.nea.fr/html/rwm/docs/2004/rwm-fsc2004-8.pdf>

*Phase-2 activities* A questionnaire survey (May-August 2005) was discussed at the FSC-7 (June 2006). It was completed by a desk study reviewing relevant organizational theory. A Topical Session at FSC-7 examined “Organisational Changes: Cultural and Structural Aspects”. A final publication was later issued on the same topic.

*Milestone achievement* Publication of major reports:  
“*The Regulator's Evolving Role and Image in Radioactive Waste Management*”  
<http://www.nea.fr/html/rwm/reports/2003/nea4428-regulator-role.pdf>  
  
“*Cultural and Structural Changes in Radioactive Waste Management Organisations*”.  
<http://www.nea.fr/html/rwm/docs/2007/rwm-fsc2007-2.pdf>

*Phase-3 follow-up*

This theme was taken up in 2009 with a topical session and discussion at FSC-10, including presentations from France (Opening up to the academic community) and Sweden (Community of Practice study assessing independence - economic, moral and intellectual – among institutions staffed by persons of similar training and background).

In preparation for FSC-11, the suggestion is made to send out a questionnaire to the FSC members and possibly also to organizations outside of this group, such as environmental groups and relevant municipalities. The aim is to collect information so that we are able to map (i) differences regarding the relationship between the regulator and implementer in the different countries and RWM programmes and (ii) differences regarding the definition and meaning of transparency in the different countries and programmes. Another area to map could be (iii) differences regarding ethical principles, how they are used in organisations (e.g., as guides for performance and its evaluation), and how they are linked to the interaction between the organizations and stakeholder confidence in the different RWM programmes. A proposed questionnaire focussing on (ii) is included below.

Topical sessions to follow up this survey could include case studies, for instance on how this ethical standard is communicated to stakeholders, or clarifying how the public roles of RWM institutions may differ by country and by decision making phase. A potential presentation could concern Sweden's Transparency Programme (its methods for increasing the efficiency of hearings, programme evaluations, and upcoming phases of work).

*The symbolic dimension*

Here there is a question of the images conveyed to stakeholders about waste managers' values, through their overt behaviour. Relationships among official players are observed by other stakeholders who draw conclusions about values, competence, trustworthiness, etc. This influences their confidence. For example, if regulators and implementers sit together in a hearing and talk down to the public, the message is not that of independence and service of a common societal protection goal. The values that others see in our behaviour may not be those we mean to support. And value positions are interpreted and evaluated differently by different people. Possible questions to get at the symbolic dimension, or reflecting the tacit interpretations that people are apt to make: 'Is this a learning organisation and is it willing to take on new information, is it responsive to change? What are the values the organisation is demonstrating and how are they interpreted?' Admitting uncertainty now has greater value than claiming total knowledge – people now have more confidence in people who admit they do not know anything. Visibility of different players and the way in which they play their role and any differences in the way people play their role. Doing your job well is vital, but so is being seen to do your job well. What messages and values are communicated through the way interactions occur and through

behaviours? (The Swedish Transparency Hearings offer a case study in analysing stakeholder values and arguments.)

*Knowledge transfer* Plans for dissemination or interaction with other publics need to be identified

*Responsible FSC Member or Lead Organisation* Eva Simic and other willing FSC member

*Examples of questions*

- What are the results and learning from the Transparency Hearings (Sweden)?
- How can the principles of good management (openness, transparency, accountability etc.) be integrated into organisations?
- What qualities should organisations look for in their staff during appointment, promotion, training and appraisal?
- How to balance the requirement of openness and the increasing concerns over security?
- How are R&D organisations opening up their work to outside scrutiny, knowledge and critiques and/or trying to enable stakeholders to influence their work?
- Change/dynamics of roles of different players e.g. regulators, review bodies etc.
- What traits in national review boards lead to more respect and confidence in their role?
- What are the socio-political traditions that weigh upon actors in RWM institutions? (habits regarding cooperation, decision-making, etc.)
- What is good practice for ways of systematically addressing the outputs of public and stakeholder engagement in decision-making at Board or senior level within organisations?

If there are organisations that undergo major changes a report to the FSC will be welcomed. The country report template for regular meetings can be used for this purpose.

*Proposed questionnaire validated by the Core Group (Feb. 2010)*

*“Mapping transparency”:*

- a. What is the definition of transparency in your organization?
- b. Does your organization consider that there is a difference between ‘openness’ and ‘transparency’? If so, what is the difference?
- c. For which issues is transparency seen to be desirable? In these cases, how does your organization move (or plan to move) from openness to transparency?
- d. Can you give examples of how transparency, or the lack of it, has had an impact on stakeholder confidence in your context?
- e. Can you give examples of how transparency, or the lack of it, has had an impact in your context on relationships between organizations?
- f. *If not covered by (c):* Which issues are the focus of your organization’s transparency work?
- g. How do you work to reinforce transparency?
- h. How does your organization balance the need to have space and time to develop its thinking with the need to work transparently and involve stakeholders in work as soon as possible?

### 3. Media, Internal and External Communication, and Stakeholder Confidence

Societal confidence is necessary for robust decisions to be taken and for the successful implementation of long-term RWM programmes to proceed satisfactorily. Building confidence relies to a great extent on the information that the public integrates about radioactive waste and its management.

The public perception of RWM is based on a mixture of messages coming from key technical and political actors, which are relayed by the media. That is why a comprehensive information and communication policy needs to take into account relations with the media. Media are an essential stakeholder in the field of RWM and their confidence as well as that which they can instil in the public is important.

In reality, the media are a fundamental generator of RWM information influencing public opinion, as well as an amplifier of information from many diverse sources. Consequently, the different institutional players within the field of RWM, when trying to get their messages through effectively, must understand how the media operate. In Phase-2, following a framing session with academic speakers, a regular series of topical sessions allowed practitioners to present their experience with the mainstream media and with new media for public interaction (including digital platforms).

In Phase-3, there is greater awareness that interacting with stakeholders through the media implies an ability to communicate with the environment outside the organisation—and this, in turn, implies coordination, competence and strategy within. *The title of this theme is therefore enlarged in Phase-3 to "Media, internal and external communication and stakeholder confidence".*

Examples of new investigation topics include:

*Broadening journalists' technical knowledge base and contacts.* Issues related to radiation, nuclear power and waste management are complex and difficult to report and to understand. If journalists do not have a grasp of specific concepts, this can result in reporting of incorrect information and in misunderstanding among the general public. Information initiated by implementers may be regarded as biased by the Media, whereas typically the regulator is regarded as a neutral and reliable source of information. The regulator can help to increase journalists' knowledge about radiation and nuclear issues and implementers can be involved in a balanced way. As an example, in Finland STUK has provided training seminars for journalists for many years. These courses have been very popular. The FSC could hold a topical session on the regulator's role in broadening journalists' technical knowledge base: a STUK representative could be invited to give a presentation on the Finnish case.

*The need for a consistency of messaging (and potential pitfalls).* In the institutional landscape it is valuable that stakeholders be able to turn to an independent source of information/ channel of communication. Still, at a minimum there needs to be coordinated communication and policy between implementer, regulator and government around a specific incident. However, uniformity of messaging between the implementer and regulator might look like over-influence (see here the link with Theme 2, independence and "community of practice"). There is a need for grounding in the distinct competence of each institutional actor. To an extent, too, people within an organization need to be able to speak from their own personal experience for the communication to be credible and appear transparent. The media need to be able to speak directly to the people doing the work, and best results are obtained when personal relationships of confidence are established between a journalist and an informer. These observations suggest that staff who are going out to communicate must be confident to do this and be trained.

*Initiating activity:* Topical session at FSC-5, "Proceedings of the Topical Session on Media Relations held in June 2004 and 2005" NEA/RWM/FSC(2006)5 <http://www.nea.fr/html/rwm/docs/2006/rwm-fsc2006-5.pdf>.

*Phase-2 activities*

A topical session at FSC-6 examined “Experience with Electronic, Web and Internet Platforms for Communicating on Radioactive Waste Management” <http://www.nea.fr/html/rwm/docs/2006/rwm-fsc2006-6-prov.pdf>. At each regular meeting, members presented case studies, e.g. at FSC-8 we heard how organisations handled communication to prepare for, or react to, major events.

*Phase-3 follow-up*

The case study formula is to continue. Of particular interest are case studies on (a) how messages are communicated (e.g. consistency of messaging across institutions; the communication of technical confidence; the communication of formal processes and stakeholder opportunities to intervene); (b) Strategies (e.g. how internal communication supports and reflects external affairs; positioning on key issues like “transparency”); (c) Means (e.g. calling on public affairs officials and/or training technical staff members; crisis preparedness structures and activities); (d) Methods and techniques (e.g. the use of web-based pressrooms and other internet or technological tools); (e) dealing with crisis. Members’ Country Updates (FSC-10) identified cases of informing the public about safety or about site selection, and of asking for stakeholder input on institutional strategies.

A topical session is proposed for an upcoming meeting on broadening journalists’ knowledge base and contacts, to include a presentation by the Finnish regulator.

Of interest would be comparison cases from e.g. the chemical industry. Additionally a specific study could be made on “What learning exists about the scope, level of detail of information, and forms of communication that should accompany an invitation to local communities to participate in a siting process, and that might be required during subsequent negotiations?”

*The symbolic dimension*

Of interest is the content analysis of key messages transmitted by the RWM institutions, and how they have evolved over time. How does the image of these institutions change in consequence? To which pressures are these evolutions the response? What effects of these evolutions can be observed in the societal handling of RWM?

*Knowledge transfer*

With the help of student interns from journalism/political science masters’ programmes, produce a publication signalling the main messages and lessons learnt from Phase-2 case studies. A flyer could be produced on the same basis. Use student support also for updating the Phase-1 survey and drawing the lessons from the Phase-2 questionnaire responses.

*Responsible FSC Member or Lead Organisation* Timo Seppälä and Eva Simic

*Examples of issues:*

- Members’ communication strategy and experience with the media
- Reflecting on members’ websites, e-communication, and issues arising with new media
- Successes and failures in both “normal” and crisis situations

- Differences between local and supra-regional media
- Organisational arrangements that are necessary for meeting the needs of the media
- Aptitude and training needed for scientific experts and/or PR staff to inform and communicate
- Have journalists changed their attitudes following the so-called renaissance of nuclear power? How do sensitivities change?
- Link to global warming

*Proposed participants:*

FSC delegates, journalists, newspaper editors, TV producers, media researchers (e.g., schools of journalism), heads of communication departments in RWM institutions.

#### **4. Tools and Processes to Help Society Prepare and Manage Decisions (e.g., about Technology, Sites) through Stakeholder Involvement**

In Phase-1, a Topical Session on Stakeholder Involvement Tools was organised, which was followed by a Desk Study on such tools. This produced a concise guide to help in setting up and evaluating stakeholder involvement processes. A separate session focused on the EIA, which is a widely used framework for stakeholder involvement.

A key question of stakeholder involvement is the handling of divergent views. Differences between stakeholder perspectives, values and needs surfaced at Phase-1 stakeholder workshops and site visits, which were reviewed in the major publication “Learning and Adapting”. Also, the Phase-1 Desk Study on the Mental Models Approach explored related descriptive research. FSC members suggested that a new theme could explore how stakeholder involvement can foster and facilitate societal handling and transmission of RWM responsibilities. Another related question identified in the FSC Phase-1 was “how to raise (political) awareness that countries have problems that need to be solved”.

*At the start of Phase-3, members observe that there are a variety of directives and regulations which come into play, on both national and international levels, making it difficult to communicate about them (link seen here to Theme 3) and thereby promote clarity in roles and structure, and confidence that society has appropriate protective mechanisms in place. As another example, stakeholders raise questions about why regulations and directives which pertain to toxic waste do not also pertain to radioactive waste (and vice versa). The NEA study-project “Radioactive Waste in Perspective” explores the similarities across these two fields and aims to draw lessons from the toxic waste field for application in the context of RW repository development. The FSC should benefit from this experience (those parts directly relevant to stakeholder confidence issues) and could extend it, possibly by means of a workshop involving political authorities. Interest is expressed too in learning about the findings of SAPIERR II (regarding European concepts for shared RW storage and disposal facilities for those countries that wish to cooperate), to the extent that there was learning about how such cooperation impacts on stakeholder confidence.*

*There is a desire to revisit the definition of “stakeholder” which was examined first at the launch of the FSC. The definition of the concept directs who is a legitimate player in decisions at any one point in time. With the long processes involved in implementing long term waste management approaches, the answer to the question of who are legitimate stakeholders will likely change over time, depending on the stage of decision-making. Issues arising include: what are the differences between “professional” and “personal” stakeholders, and how should each be accommodated? How to define “affected community”? How to understand the role and rights of the “general public”, geographically located outside potential host communities? National and international law frame these concepts, and*

actual practice (for instance, which publics are consulted in the context of an EIA) may impart another, complementary framing. Lessons could be drawn from FSC membership cases, and also, from other large infrastructure projects. Of special interest to the FSC are *Regional elected authorities* (REAs) because they can have key functions and responsibilities like the implementation and supervision of industrial and environmental regulations at regional level, the planning, designing, constructing and maintaining of infrastructure that could be crucial for the operation of the facilities. Most of the time, they are also promoters and coordinators of economic measures destined to foster local well-being. A second key point is that, compared to central or national administration, REAs are closer to the people living in the affected regions – in a geographical sense but potentially also regarding the understanding of attitudes towards the planned project. Thus they may play an important role in the development of local public perception and public opinion.

In 2010 the RWMC decided to support the next International Conference on Geological Repositories (ICGR-2011) entitled “*National Commitment – Regional/Local Confidence*”, to be held in Japan late October-early November 2011. The RWMC Bureau plans to support the conference with a paper dealing with this topic and based on the work of relevant subcommittees (deadline for discussion draft: March 2011). The FSC can certainly contribute with experience from several themes and publications and the REA topic may take on further importance in this connection.

*Theme 4 could couple with Theme 1 to look at so-called social analogues as tools for helping develop confidence in society’s ability to make durable decisions or preserve memory.* Examples might be found in literature about political decision-making regarding technology or contentious projects. An example of an institutional analogue is the centuries-long Vatican archiving project. A Nirex report examines how records and civilisations survive over time.

<i>Background materials</i>	Topical Session at FSC-4 and short guide on Stakeholder Involvement Tools; “Learning and Adapting” report; Desk Study on Mental Models; past FSC seminars and workshops; the OECD PUMA activity on involving citizens in policy making (see also FSC-4 topical session); Nirex review of evaluation criteria that stakeholder dialogues have identified as important; a 2007 NEA study: <i>Environmental Radiological Protection in the Law</i> ( <a href="http://home.nea.fr/html/rp/reports/2007/nea6172-law.pdf">http://home.nea.fr/html/rp/reports/2007/nea6172-law.pdf</a> ).
<i>Initiating activities</i>	Co-operation with projects and programmes that tackle these issues actively, e.g., CARL, and link-up with those involved in other controversial siting decisions (e.g., infrastructure projects);
<i>Phase-2 activities</i>	1) Briefing from relevant projects and programmes; 2) Topical Session at FSC-7 (2006) "Tools and Processes to Help Society Prepare and Manage Decisions in the Field of Radioactive Waste Management" ; 3) FSC-8 (2007) "Tools and Processes for Handling of Transfer of Burdens, Knowledge and Responsibility (Preparing Future Generations and Empowering Local Communities)".
<i>Phase-3 follow-up</i>	Case studies are a preferred approach. A “Legal and Policy Issues” topical session was held in June 2008, including how institutions are explaining the permitting process to stakeholders, and an OECD GOV presentation on open and inclusive policy making practices now emerging across the OECD member countries. The definition of “stakeholder” and rights and obligations according to international agreements and law was addressed. This Topical Session also welcomed a French MP reporting on proposals



for defining the status in formal procedures of self-declared interested parties (NGOs, CSOs).

At FSC-10, a subgroup heard reflections on the definition of “affected communities” according to the UK participants in Cowam in Practice.

At FSC-10 a TS was organised to understand the needs and aspirations of regional elected authorities viewed as stakeholders. Because of the complexity of national differences, the TS focused in large part on describing the role and responsibilities of the various REAs. Proceedings will be issued. It was agreed to envision a new TS at a later date, which could investigate REA interests (as distinct from those of local or national stakeholders), and also, experience and best practice in cooperating with these authorities.

*The symbolic dimension*

The symbolic dimension deals with meanings conveyed to stakeholders. Proposed long-term solutions for radioactive waste management pose new and complex questions to the public, especially when considering all aspects concerned. When involving people to prepare decision-making, several meanings are launched. One meaning is a willingness to be open and inclusive; another is to make people partners of the results and decisions. People feel better if, for this second aspect, advantage is taken of their own independent knowledge. Providing tools means providing better ways of achieving solutions of higher quality but also allowing people to intervene in a more informed and prepared way, thus reinforcing their sense of potential informed consent. A legal text is a legal list of rights. The existence of legislation and regulations to promote public participation in environmental decision-making strengthens the belief that the process is to be fair. The grounds for interaction among the different stakeholders are known as the rights granted to each of them. International legislation could be seen as interfering in national plans but also as a confirmation of the adequacy of domestic procedures. In the European case, international (European legislation) is an additional legal guarantee where citizens’ rights are also backed by the European Court.

*Knowledge transfer*

Interaction with political authorities around the issue of toxic/hazardous/radioactive waste governance? (see proposed Workshop above)

*Responsible FSC Member or Lead Organisation* Janet Kotra and Mariano Molina

*Examples of questions :*

- Explore the issue of leadership: who leads the process at which points? How is this agreed upon? How is co-ordination achieved between institutional bodies and other independent organisations?

*Possible topical work on democracy:*

- How can divergent perspectives of national and local stakeholders be reconciled? How to handle highly polarised stakeholder views?
- Effectiveness of legal participatory tools that help manage decisions, e.g., are referenda an effective tool?
- How to achieve long-term acceptance of majority votes on long-term issues?
- How to deal with participatory democracy?
- What are the potential limitations of representative democracy in long-term management problems?

*Possible topical work on memory:*

- What are appropriate cultural and societal tools for helping develop confidence in society's ability to make durable decisions or preserve memory?

*Possible topical work on national engagement plans:*

- What good practices exist in provision of 'national engagement plans' that set out all forthcoming engagement on radioactive waste management issues, thereby enabling stakeholders to understand (a) the relationship of the engagement to decision-making; (b) the objectives of the engagement; (c) the timetable for engagement; (d) how the engagement links to other levels of engagement?

## **5. Increasing the Value of Waste Management Facilities to Local Communities**

It was observed at Port Hope, Canada, that there is an interest in having the waste tailings treated so that the storage areas can gain amenity value. The Belgium workshop suggested that waste facilities could have cultural and amenity value. In the UK, a key word in current discussions is "additionality". Communities that may be interested in participating in a siting process take the view that a package should be (a) additional to maximising cultural and amenity value of the facility and (b) additional to current socio-economic initiatives or support measures. 'Additional' packages are seen as essential to incentivise participation and to compensate for actual and perceived impacts. A milestone was reached in Phase-2 with the publication of a major report on this topic.

The FSC has high interest in the experience of stakeholders who have used the RWM process to create added value for their community, creating a basis for a positive relationship with the waste, which may be a basis for durable memory. There is interest too in how to develop a stewardship process/information which will be carried forward as a "rolling present" by each subsequent generation, rather than trying to identify today e.g. what a "permanent" marker might look like. The concept of the rolling present is important because we cannot make presumptions about the very long term and how waste will be managed or how information will be presented and what information will be needed. At the start of Phase-3, as some members begin or approach construction of facilities, one key question to be considered is how we get to greater confidence from actions we take and put in place now to preserve memory. Following on the Phase-2 work, what kind of "cultural marking" can foster a positive, productive and sustainable memory of the facility?

In relation with the "stakeholder definition" topic (Theme 4), it may be interesting to examine the trends regarding the territorial level that most effectively engages with siting and long term integration issues: the community (whilst small communities are disappearing all the time), or regional alliances?

Work in this thematic area could nourish the ICGR-2011 submission planned by RWMC (see Theme 4).

*Initiating activity* The issue of durable community relations emerged in the Canadian and Belgian Phase-1 workshops, where options for creating a relationship between a community and an RWM facility were discussed.

*Phase-2 activities* A desk study reviewed the notion of culture and added value and gathered examples from the FSC archives and beyond; this was presented to FSC-6 (2005). Thirty-two stakeholders sources then were consulted via telephone and face-to-face interviews, or gave written questionnaire input. An augmented and revised study with input from Prof. E. van Hove was presented at the Hungary Workshop and validated at the Business Meeting of November 2006. FSC members suggested that a folder of pictures and examples of value-added initiatives might be constituted and added to by members to facilitate presentations of the work.

*Milestone achievement:* *Publication of a major report* “Fostering a Durable Relationship Between a Waste Management Facility and its Host Community; Adding Value through Design and Process” NEA/RWM/FSC(2007)1 [<http://www.nea.fr/html/rwm/docs/2007/rwm-fsc2007-1.pdf>]

*Phase-3 follow-up* A workshop may be held with local stakeholders to examine experience with adding value. Sweden continues to be a leader in this domain. There should be a focus in the interim on developing a worthy FSC contribution to this workshop. Many of the questions identified in the current PoW are topical.  
A TS on this theme was organised at the FSC-10 meeting to share experience and best practice on creating a durable relationship between a facility host community and the RWM institutions. Proceedings will be issued.

*The symbolic dimension* Benefits packages can demonstrate recognition of the role a community is playing on behalf of society – an appreciation of their role. Engagement support packages can demonstrate the importance of a community in the process and their issues and concerns. It is important to understand what is of particular concern to a community because of their history and context, e.g. water in an arid area equals survival and therefore needs more protection, or clearer enunciation of the intention to protect, than would be the case in another context. We need to demonstrate respect of the values that people hold and pay attention to the issues of importance to the community.

*Knowledge transfer* To start with, a flyer on this theme has been created and released.

*Responsible FSC Member or Lead Organisation* Jay Redgrove and Claudio Pescatore

*Examples of questions:*

- Has a relationship between the facility and the community been established? What kind of relationship?
- How to bring people into suggesting how the facility could look?
- How could aspects such as multifunctionality, added cultural and amenity values be conceived starting from the design stage?
- How to set up local/regional development programmes? What kind of cultural value could an operating repository have? How about a repository after closure?
- What kind of symbolism could be evoked in designing the facility?
- What are the cultural events that could be associated with underground management facilities?
- What are the benefits of a strong regional alliance for supporting community positions vis-a-vis siting, and for long-term development?
- Assuming a community-facility relationship exists, how can we develop greater confidence from actions we take and put in place now to preserve memory?

If there are new insights or innovations, a report to the FSC will be welcomed. The country report template for regular meetings can be used for this purpose.

## **6. The Symbolic Dimension**

Because this theme is recognised to be transversal, specific suggestions and leads are recorded under the five investigation themes above.

The FSC has long been sensitive to the social values that underlie differing stakeholder perceptions and positions. People, including technical specialists, view different symbols in different actions and perceive things in different ways. Repeatedly, books, films and articles for the mass market evoke various symbolic images associated with radioactive waste and its management. Sometimes we underestimate the importance of some aspects of our work and their relevance to stakeholders.

In Phase-3 there will be an opportunity to probe this question with academic experts, to enhance our awareness of the symbolic weight of the concepts we deal with daily ('loaded terms' like safety, landscape, community...). We could look at what symbols people perceive and whether they can discuss and agree them. Are there rules of presentation or perception that could help us better understand the impact of RWM concepts and how people receive them, and help us challenge our own ideas and better formulate messages?

As well, we may need to talk about the meanings attributed by stakeholders to the actions of RWM organizations – the underlying values and messages they perceive. We could look at what symbols are important and why, and how these can be demonstrated. For instance, at a public meeting we should pay attention to who is at the table, and place everyone at the same level, in a circle. Otherwise we inadvertently create a 'them and us' culture when the regulator and implementer are sitting together on a stage facing against the community.

SKB's Technical Report TR-07-12 (RD&D Programme 2007) explains the need for research on "Public opinion and attitudes – psychosocial effects" in this way: "The purpose of this research is to study how opinions and attitudes are formed and change; this knowledge contributes to a better understanding of different actors' decision-making. Opinions and attitudes are not just a reflection of decision-making, actual events and communicated messages. Individual characteristics and

perceptions of reality also play a role. Deep-seated values and norms, group identification, perceived fears, anxiety about risks, and self-interest are some examples of factors that also influence public opinion and attitudes. It is therefore also important to shed light on the “symbolism” surrounding the final repository and its activities.” (p. 11)

This transversal theme is about *overt and less overt message*, about *making what we do better visible*. In the ambition to improve ourselves, the theme should add to our *awareness of what we do and how we are perceived*. The aim is to *become more aware of the deeper implicit level*, to aid in our relations with stakeholders.

“ ... It has to be wondered whether an object, and a disposal process that engages such an extensive, costly and meticulous scientific attention, that has become the focus of deep societal controversy for more than 50 years, and that is expected to remain the object of permanent surveillance for hundreds or even thousands of years, can be considered to be just a waste? The nuclear wastes, that most people have never seen, have become folkloric in the deepest sense of the term. The class “nuclear waste” is an icon, a symbol of the great adventure (and the uncertain destiny) of our technological civilisation.” (Martin O’Connor, FSC 2003). According to Prof. O’Connor, “Wastes have moral and symbolic weight because they work as objects that support emotions and feelings of people”.

#### *Phase-3 follow-up*

An exploratory topical session was held at FSC-9 (2008).

Out of this session and additional research work a report was written that was first discussed at the FSC Business meeting in April 2009. A major, final publication was approved at FSC-10, where a topical session was also held.

Potential speakers for a future Topical Session might include: Brigitte Mral (Professor of rhetoric, Örebro university - Argumentation analysis & rhetoric; research and practical implementation), Stig Arne Norstedt (Professor in Media & communication, Örebro university) Swedish National Council for Nuclear Waste.

We could conduct a content analysis of public information documents “before and now”: how have value messages changed?

Also, members could report on sociological studies they may have read which examine imagery of nuclear waste or related topics (the Secretariat is aware of at least three studies in France, including the Andra book “Faut-il avoir peur des déchets radioactifs?”; Jorge Lang-Lenton mentioned Spanish studies... etc.)

#### *Knowledge transfer*

Once the current report on the symbolic dimension of RW is approved, a flyer could also be considered according with the FSC policy to produce flyers associated with each major report that is released.

*Responsible FSC Member* Claudio Pescatore with Core Group support  
*or Lead Organisation*

## 7. FSC Knowledge Consolidation and Transfer

The FSC has an excellent publication record, publicly disseminating the proceedings from numerous topical sessions and from the workshops, including each time a set of reflections or lessons learnt. Significant desk studies (including member consultation) on social science-related topics have published, as well as member surveys on such issues as communication practices or organizational change. A major report compiled best practices and lessons learnt in the first four years of the FSC.

It's necessary to benchmark practices from time to time. To create reference points is a conscious ambition as with the internet publication of FSC and NEA studies including for example RWM collective statements.

*In phase-3 flyers will be used to condense the central concepts attained over the lifetime of the FSC.* The aim is to consolidate FSC culture. These two-page flyers should allow FSC members, and members of their institutions, to check and confirm the major knowledge gained from the activity. The documents can also form the basis of discussion with other stakeholders. The FSC flyers are NOT intended to provide basic information about RWM. They assume a familiarity with and engagement in the issues. Three types of flyer are foreseen: 1° FSC "Identity". 2° Main principles, precepts, observations stemming from FSC experience. 3° Stand-alone summary of major reports. All will point to further information resources (FSC documents and original reports, available online). It is intended to produce a summary flyer for each PoW theme or major FSC report.

Additionally, member institutions may need to provide public information on what is happening in each country in the field of stakeholder involvement. To serve this need the FSC national updates could be written to fit a template and made public. A complementary solution could be to pick up national studies and add to them to make them more complete.

The website is a goldmine for academics and students of the social and technical history of RWM. Academics certainly appreciate factual information (updates are especially useful for them). Case studies introducing "best practices" are of great value for teaching. Comparing successes and failures is highly educational, especially if derived from the RWM history of the same country. It is a problem, however, that several interesting cases presented at FSC meetings were not written up due to the lack of time on the part of FSC delegates. It should be discussed how this could be remedied.

The FSC often solicits academics to be rapporteurs at the national workshops. National hosts have also systematically invited academics to present specific aspects of their national situation (e.g., legal setting) or to stimulate reflection on some background or theoretical point. Often these are academics who work with the national institutions, and the FSC thus benefits from an existing relationship. We count on academics to give us insight from another sector and/or from another framing of the issues, from a different disciplinary stance. Some observations by our rapporteurs have led to significant FSC developments. It has also been suggested that we should develop relationships with learned societies like the Royal Societies in UK and the Interacademy panel.

Of particular importance will be consideration of "two-way" methods for knowledge building, rather than only dissemination of FSC materials.

### *Phase-3 follow-up*

Continue to develop flyers and encourage national dissemination. Check that members' websites have a link to the FSC download page. Consider "leveraging" of national or institutional studies, which could be augmented by the FSC and disseminated to the NEA public via internet. The NDA

Partnerships review document<sup>4</sup> was submitted to the membership for augmentation. The document now includes case studies from 13 countries and will be published in early 2010 as a flagship FSC document.

Several FSC flyers already have been produced and translated (English, French, Spanish) (<http://www.nea.fr/html/rwm/fsc.html>). Two draft flyers were developed after FSC-10, on partnering and on the FSC workshops. Ideas for other flyers are found throughout this PoW and should be prioritised. To draft and follow up these proposed flyers, volunteer efforts from membership would be most welcome.

An FSC Summer School could be conducted on a given theme, with national support. The FSC could hold an international conference as a way of sharing lessons learnt with a larger set of stakeholders. In parallel, FSC members should feel empowered to present our materials at conferences they attend. Needed would be a set of Powerpoints that could be adapted to each case. A partnership with masters' programs (mentioned under theme 3 above) is another vector for knowledge transfer, towards both the student interns and the public for the documents they can help us develop.

*Responsible FSC Member* Claudio Pescatore with Core Group support  
*or Lead Organisation*

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<sup>4</sup> <http://www.nda.gov.uk/documents/loader.cfm?url=/commonspot/security/getfile.cfm&pageid=13533>