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1. Introduction

1.1 Background and objectives

OBRA is a 2-year Coordination Action under the 6th FP EURATOM “Management of Radioactive Waste” which aims to assess the feasibility of creating an Observatory in order to address the concerns and information needs of different stakeholders on radioactive waste management. In particular, local and regional communities lack access to an authoritative yet independent platform of experts which could provide them with the sufficient knowledge base as to be able to take sound decisions concerning the long-term. In this regard, OBRA will devise an Observatory to promote appropriate forms of interaction between stakeholders, mainly local and regional communities and experts.

Thus the focus and value of OBRA lies on the development of a concrete tool to promote governance processes. With respect to this objective, results of earlier and current European governance projects are considered, not intending to elaborate further on the scientific approach to good governance processes.

This report, developed within work package 1 of the OBRA project, provides an overview of governance models for radioactive waste management, as a first approach to defining a set of features for an Observatory for Long-term Governance on Radioactive Waste Management.

The objective of this report is to identify and agree upon a first set of success factors for approaches to governance on radioactive waste management. A first version of this report was part of a series of background documents which served as an input for discussion in the first workshop of the OBRA project which was held in Vuojoki (Finland) from 31 January until 2 February 2007. The report at hand is the final version, which considers the comments from the workshop discussions.

1.2 Methodology

The development of success criteria for a governance model for nuclear waste management in this report follows a stepwise approach:

In the first step (chapter 2.1), an overview is given on the existing socio-scientific knowledge on selected governance experiences and principles, which is elaborated on the basis of a comprehensive literature research and review. The results gained

- provide a suitable definition of “governance”, which is suggested as a basis for a common understanding within the project and the project team, and
- serve as a preliminary base to derive qualified criteria.

In a second step (chapter 2.2), elements of successful governance processes are identified by expert judgement and by assessing different existing evaluations. From that, three key elements of governance activities are defined which serve as a guideline for the next evaluation steps.

Thirdly, relevant European projects dealing with strategies for the governance of complex processes in the field of (potentially) hazardous technologies are evaluated (chapter 3) with respect to the following considerations:

- Completion of key elements;
- Redefining successful governance strategies.

In the final step, a joint analysis of the main governance features of the European projects is performed which results in a revised set of key elements. These key elements are presented as a preliminary set of success factors which guide the development of an observatory strategy in the next work packages of the OBRA project.

2. The socio-scientific background of “governance”

2.1 Governance Definition and Framework

Governance is the process whereby societies or organizations make important decisions, determine whom they involve and how they render account /IoG 2006/.

[Governance] is a neutral concept comprising the complex mechanisms, processes, relationships and institutions through which citizens and groups articulate their interests, exercise their rights and obligations and mediate their differences /UNDP/. It is a continuing process through which conflicting or diverse interests may be accommodated and co-operative action may be taken /QUB 2004/. To sum it up, governance in general represents the traditions, institutions and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern /PHA 2006/.

The term "governance" is adaptable to both structured and unstructured settings. It can relate to direction-setting in organizations (such as businesses, governments, non-profit entities) and in looser associations (partnerships, communities, alliances, international accords).

The process of governance - the taking of decisions and rendering of account - typically rests on a *governance system* or framework. The *formal* elements of this system (constitutions, bylaws, policies, conventions) define how the process is supposed to function in a particular setting. In parallel, the *informal* traditions, accepted practices, or unwritten codes of conduct that people follow are often equally important in determining how governance works /IoG 2006/

General characteristics of good governance include (s. inter alia: /EU 2001/):

1. openness (work in a more open manner, using accessible and understandable language, improving confidence),
2. participation (ensuring participation from conception to implementation),
3. political, bureaucratic and corporate accountability (clear roles of legislative and executive processes),
4. freedom of information and expression (access to information and right to say),
5. capacity building,
6. (coherence, effectiveness)¹.

¹ As these factors address primarily the evaluation of European policy, and are of minor importance for the given ask.

2.2 Elements of Governance

To transmit the general issues to local or regional activities of formal and informal participatory processes - in the context of potentially hazardous and/or publicly disputed installations - one has to consider a set of different tools as well as different context conditions.

Furthermore a careful evaluation is necessary to define the stakeholders that have to be addressed in each specific case. Certain groups as e.g., implementer, regulator, national / regional / local representatives of the public as well as different scientific research institutions (universities, independent institutes), will usually be represented but have to be specified and complemented by others relevant stakeholder groups and representatives.

The choice of the most eligible steps of a regional governance practice depends on the particular framework setting. In the following we derive a set of core elements from different practical approaches (/Ffm 2000/, /AkEnd 2002/, /FSC 2004a/) and an evaluation of recent studies and experiences regarding participatory planning and management in different EU member states (/Brohmann 2006/, /Öko-Institut 2006/).

2.2.1 The national level

Different scientific discussions on risk communication and evaluations of national site selection processes show that in the field of radioactive waste management an agreed national frame- and agenda-setting should be established beforehand (cf. e.g. /AkEnd 2002/, /Hocke-Bergler/Gloede 2004/, /Jordi 2006/, /Öko-Institut 2006/). A national consensus or any kind of a common understanding about the general necessity of a suitable site and its technical and geological standards as well as the consideration of socio-economic selection criteria will support the regional debate and decision making process /Öko-Institut 2006/. According to /COWAM 2003/, a national framework for nuclear waste management is an essential basis for decision-making processes at the local level. /FSC 2004a/ points out that moving from the national to the local dimension (e.g. for site characterizations) requires the pre-existence of a decision-making process that is widely supported, and is adhered to, by all actors.

Having this in mind the national level plays a vital role in the preparatory stage of regional governance processes in the site selection process for a repository for high level radioactive waste and spent nuclear fuel for different reasons:

- Implementing a high level waste repository is a singular process and - in most countries – takes place in a politically and socially controversial arena: while the solution of the challenge is of high national interest the local level is simultaneously highly affected. /FSC 2004a/ describes long-term radioactive waste management as “a national problem with a strong local dimension”. This has to be reflected in an appropriate cross-linking of the national and the regional governance processes.
- The site selection process in different regions requires that the regional governance processes meet national demands to assure that their aims and objectives are compatible with the general process on the national level.

- Experience shows that including regions with potential sites in a national selection process can cause strong opposition in the respective regions. Fixing the key features on the national level in an early stage can support a timely start of the regional governance process to avoid unorganized developments that might enhance potential conflicts /AkEnd 2002/. The discussion of the national policy will frame the whole process both at local and national levels. “If national debate doesn’t run in parallel with local democracy conflict is likely to occur between national and local levels which will form an impediment to action.” /COWAM 2003/, cf. also chapter 3.2 of this report.

The focus of the OBRA project lies on the regional level, as the stakeholders addressed are mainly the local and regional communities, and respective experts /Enviros 2006/. With regard to this orientation, the requirements on the national level are not elaborated here in any detail. But it has to be kept in mind that an adequate preparation and attendance of the regional process is needed from the national level as a prerequisite for successful governance of radioactive waste management.

2.2.2 The regional level

The chosen elements of governance address the regional and local level as the key playing field for participation and partnerships in such projects.

In this context we deal with the good governance principles applied to partnerships /Edgar 2006/ as a framework. ‘*Legitimacy and voice*’ should be assured by the participants: everyone who needs to be is at the table and there should be a consensus orientation among the partners. A ‘*direction and strategic vision*’ will be developed jointly in the common process of participatory goal formulation. ‘*Performance evaluation*’ should be ensured by a monitoring and reporting of the parties work. The ‘*accountability*’ of all of the parties has to be cleared before. There have to be *sufficient resources* to build and maintain the cooperation. With the aim of ‘*fairness*’ all parties and the public in a broader sense benefit from the cooperation.

While the principles ‘*Legitimacy and voice*’, ‘*direction and strategic vision*’, ‘*performance evaluation*’ and ‘*accountability*’ have to be included in the design and implementation of the governance process (see description of elements below), ‘*sufficient resources*’ are a prerequisite which has to be assured beforehand. ‘*Fairness*’, on the other hand, is a guiding principle as well as the result of a successful process which leads the planning and implementation of every activity and step taken within the governance process.

The following three elements include the core activities of good governance on the regional level:

- 1) **Institutionalised regional cooperation** with an iterative **participatory goal formulation** regarding the economical, ecological and societal development (with respect to the planned measures/installations):
 - a) The institutionalised cooperation should be based on three main activities:
 - i) An agreed target and understanding of perspectives and goals of all actors;

- ii) Regularly working context assuring integration of all relevant stakeholders with clear accountabilities;
 - iii) Overall, separate coordination of the whole process (e.g. by institution of an intermediary).
- b) The participatory goal formulation consists of:
- i) A common vision;
 - ii) Commonly agreed indicators which describe goals and measure their achievement;
 - iii) Evaluation of next steps: ensuring a living process.

2) **Participatory knowledge acquisition and capacity building:**

Personnel training and skill-development of the participants in all involved businesses of the regional cooperation could increase local know-how, confidence, local identity and acceptance. To support the development and implementation of local know-how a transparent and jointly organized procedure of reflection and research agenda setting should be outlined.

- i) The structure of working groups allows a high level of information exchange;
- ii) The system of working groups aims at joint learning and the development of know-how;
- iii) Access to expertise is ensured for all stakeholders;
- iv) Results of the different (sub-)groups are focussed and transferred to a central organisation unit.

3) **Continuous exchange and communication** with the involved actors' network as well as with the local and regional media:

The flow and access of information is of high importance:

- i) The use of media should focus the different target groups in their informational routines and in an adequate language;
- ii) In addition, word-of-mouth information is the base for the distribution of "trusted" information;
- iii) Success – in the meaning of technical and organisational implementation - could be ensured by integrative persons (promoters) with a high level of trust;
- iv) Dissemination of knowledge from working groups to the common public is assured by official representatives as well as by the involved laypeople.

3. Overview of European-governance-projects and initiatives

This section provides an overview of the main projects funded by the European Commission which focus on governance and in particular, of radioactive waste or industrial activities. It thus gives a broad overview of the projects and the main conclusions regarding key features of good governance. It does not attempt to go into depth or cover all the details of the projects, but to reveal the main characteristics of complex decision-making processes.

The following projects are briefly described and their main conclusions extracted:

- TRUSTNET
- COWAM
- RISCO II
- RISKGOV
- CETRAD

Furthermore the CARL project, an initiative of four European countries, is considered.

During the project special attention will also be given to the 6th FP projects ARGONA (Arenas for Risk Governance) and CiP (COWAM in Practice), that also deal with aspects of radioactive waste governance. As these projects have started very recently in November 2006 and January 2007 respectively there are currently no results available which could be considered in the following evaluations in this report.

3.1 TRUSTNET (1997 – 2003) and TRUSTNET in Action (2003 - 2006)

TRUSTNET

The TRUSTNET projects, TRUSTNET (1997 – 1999) and TRUSTNET 2 (1999 – 2003), had been supported by the DG Research -Radiation protection of the European Commission. They were focussed on developing, refining and influencing governance arrangements and practice for hazardous activities and their impact on public health and the environment. The activities of TRUSTNET are based on a participatory methodology and a co-expertise of actual case studies involving experts and non-experts.

TRUSTNET operates through a broadly based network of about 150 key decision-makers, stakeholders and experts at European, national and local levels involved in activities having impact on health and the environment. The participants in TRUSTNET are representatives of public authorities at national and European levels, industry, trade unions, local governments and NGOs. Also represented are consumers or lay citizens, together with a multidisciplinary group of experts in risk management, public health, political sciences, sociology, psychology, economics, law and ethics /TIA www/.

TRUSTNET identified the difficulties and social blockages affecting the credibility, effectiveness and legitimacy of traditional regulatory framework of hazardous activities. It has also identified emerging features of inclusive risk governance as a major opportunity for overcoming the observed difficulties which are documented in /Trustnet 1999/.

As a result of these findings, the “Mutual Trust Paradigm” was introduced in /Trustnet 1999/ which is shown in Figure 1.

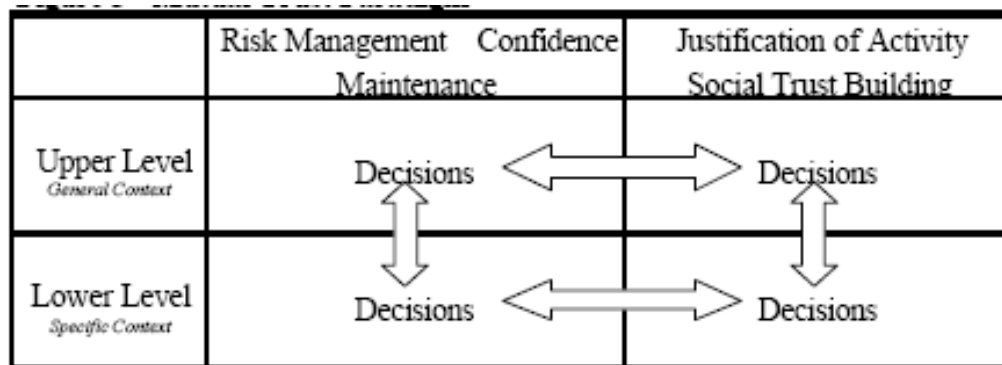


Figure 1: The “Mutual Trust Paradigm” introduced in /Trustnet 1999/

Contrary to the traditional “Top-Down paradigm” the “Mutual Trust Paradigm is characterised by the following features:

- Application of expertise and decision-making are organised as an open, interactive process;
- Various assumptions and uncertainties are discussed openly;
- Stakeholders are engaged in dialogues on all levels;
- Public authorities prepare and organise the engagement of experts and stakeholders;
- The policies established by public authorities take account of debates and arguments;
- Decision taking on the “Lower Level” is strengthened;
- Justification and social trust building are explicitly discussed and connected with Risk management in manner that both aspects mutually influence and reinforce one another;
- Confidence is maintained by engagement and mutual dialogue and by the opportunity given to stakeholders to influence the successive stages of the decision making process.

TRUSTNET 2

From 2001 to 2003, TRUSTNET 2 has carried on its previous work and more specifically investigated the possible strategies for implementing in Europe inclusive governance in the various activities entailing risks for health and the environment.

As a result of TRUSTNET 2 the report /Trustnet 2004/ was published which deals with current changes and the need for them in the field of the governance of hazardous activities. Increasing use of “inclusive processes” involving a broader range of stakeholders in both the framing and resolution of complex social and technical issues shall meet the requirements arising from social expectations and the concerns of the various concerned actors.

The objectives of this second phase of the project were to:

- identify strategies, regularly adopted in traditional decision making, which initiate and amplify societal concern and distrust,
- describe a dynamic model of the societal *processes of change* towards more inclusive governance and identify prerequisites for achieving effective change,
- identify the key characteristics of *inclusive risk governance* and provides an assessment framework to aid its practical implementation. /TIA www/

The key features *inclusive risk governance* and *processes of change* are characterized as follows:

Inclusive governance

The following list of attributes necessary for effective “Inclusive Risk Governance” had been developed in TRUSTNET 2 on the background of experience from characterising the context in which traditional decision-making is unlikely to succeed. It is stressed that the characterisation of inclusive risk governance relates to the process, not the actual outcome.

The criteria proposed for defining inherently inclusive risk governance processes are:

1. Empowering affected individuals and groups and engaging them appropriately

- Bringing stakeholders into the decision making process in a way that allows them to contribute.
- Integrating stakeholders at an early stage which allows them to influence the scope of the debate and the issues to be considered, within the bounds of certain constraints (e.g. legal, ethical and equity considerations).
- Enabling all participants to contribute fairly and equally to the debate (e.g. sufficient understandable information and feeling confident to act on it; training or facilitation).
- Enabling local communities and local decision-makers to produce their own strategy.
- Permission of readily accessible expertise.

2. Operating in an atmosphere of mutual respect and trust.

- Clear lay out of stakeholders’ role in the decision making process, including any limitations;
- Consistency between the scope of the process and the issues identified by the stakeholders. E.g. the scope of discussion should not be predetermined by or limited to the narrow field of a specialist regulator.
- Commitment of concerned parties to joint definition of a problem and development of a solution.

3. Creating the conditions for stakeholders to appropriate the relevant scientific evidence to meet their needs

- Common basis of sound scientific evidence is appropriated.
- Scientific and technical expertise is recognised as legitimate and valid input.
- Experts are assisting the process while not capturing it.

4. Practical decisions and strategies, flexible and open to revision.

- Process produces decisions or strategies that are practical to implement.
- Flexible and adaptable solutions which are open to revision over time.
- Agreement on criteria for review.

5. Recognition as legitimate and fair.

- Striving for a decision making process which is recognised as transparent, fair and legitimate by interested parties.
- Transparency, how contributions of those involved are taken into account.
- Achieving a robust decision which even those who oppose it can recognise for as legitimate.

6. Feedback on contributions.

- Provide a clear audit trail to explain who made the ultimate decision, how the contributions of stakeholders and scientific knowledge were used and on what basis or criteria the decision was made.
- Decision is not necessarily determined by the views of the participants, but at least takes into account all the dimensions raised by them.

7. Production of a shared risk governance culture.

- Promoting mutual understanding and confidence between involved stakeholders beyond the obvious goal of reaching a decision.
- Developing stakeholders' competence in participative governance, including a better understanding of the strengths and weaknesses of 'scientific' risk assessment in the governance of hazardous activities. /TIA www/, /Trustnet 2004/

The process of change towards inclusive governance

The process of change towards inclusive governance should be stepwise, avoiding sudden changes. The roles and responsibilities of stakeholders need to be clearly defined and re-defined throughout the process of change and the process itself should be open and transparent. It should also aim to be as fair and equitable as possible, as a stakeholder is unlikely to support a process that it perceives as undervaluing it or its views. It is proposed to distinguish between 'decision framing' (deciding on the issues to be included) and decision taking.

The structure of the process of change is shown in Figure 2.

TRUSTNET in Action

A third phase of the project, TRUSTNET-IN-ACTION (TIA), aims at the creation and the promotion of an inclusive risk governance culture by:

- Exploring new roles and relationships of mutual trust amongst all categories of actors;
- Developing and testing structures for active participation of actors in risk governance;

- Developing guidance documents for each group of actors as a means to assist them in finding their role in an inclusive risk governance culture.

A reference system for risk governance will be developed on the basis of actual experiences as well as an expert knowledge base of innovative risk governance processes /TIA www/. At present, information on this reference system is not yet available on the web.

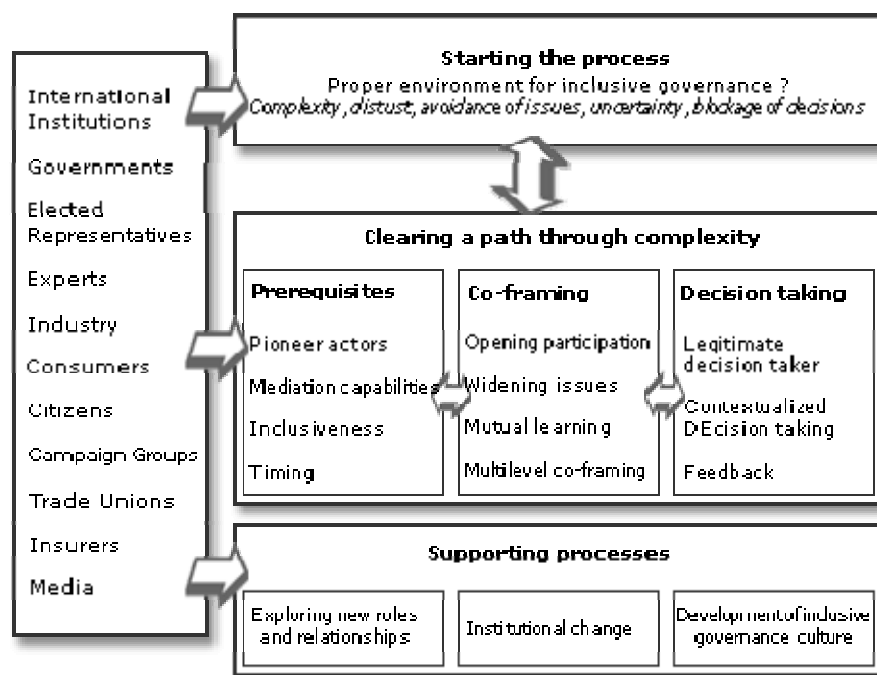


Figure 2: Structure of the process of change towards inclusive governance /TIA www/

3.2 COWAM (2000 – 2003) and COWAM 2 (2004 – 2006)

COWAM (2000 – 2003)

The COWAM project was performed as a European Concerted Action within the 5th Framework Programme of the European Commission. The objectives are summarised e.g. in /Dubreuil 2004/ as follows:

- To empower local actors through a networking process at European level between different local contexts, countries and cultures;
- To gather and discuss the available experiences of decision-making processes at the local level within their national context in Europe;
- To set up an arena for balanced exchanges between local involved people, NGOs, regulators, implementers and experts;
- To promote new approaches to decision-making in national contexts in Europe, notably by holding seminars in local communities concerned with nuclear waste management;
- To produce a Framework (the way forward) expressing the views of the participants at the end of the COWAM exercise in order to identify important questions for decision

making in nuclear waste management and to open up the way for wider reflections and actions in the future;

- To bring out a shared understanding of the issues at stake and to identify possible ways forward to improve the decision-making processes with regard to nuclear waste management in each national and cultural context.

The COWAM network brought together participants from ten countries representing different types of institutions as shown in Figure 3.

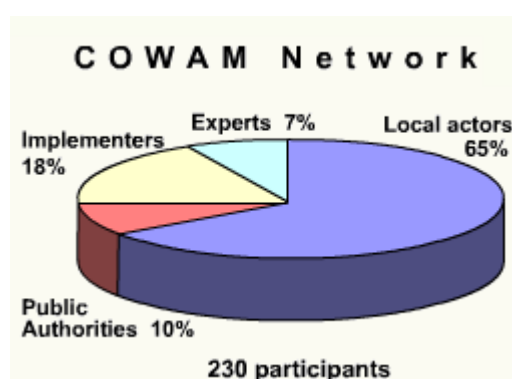


Figure 3: Share of participants of different institutions in the COWAM 1 network, /COWAM 2003/

The continued dialogue of local communities and NGOs with regulators, implementers and experts during the project was found a key to developing recommendations.

The COWAM project derived recommendations for the governance process for disposal of radioactive waste from the discussion of case studies in four seminars. Results of the “Recommendation Groups”, which had been working on different issues are documented in /COWAM 2003/ and summarised in a synthesis in the same report.

Five issues had been identified during the meetings as important contributions to governance processes. The connection of these issues was characterised as shown in Figure 4.

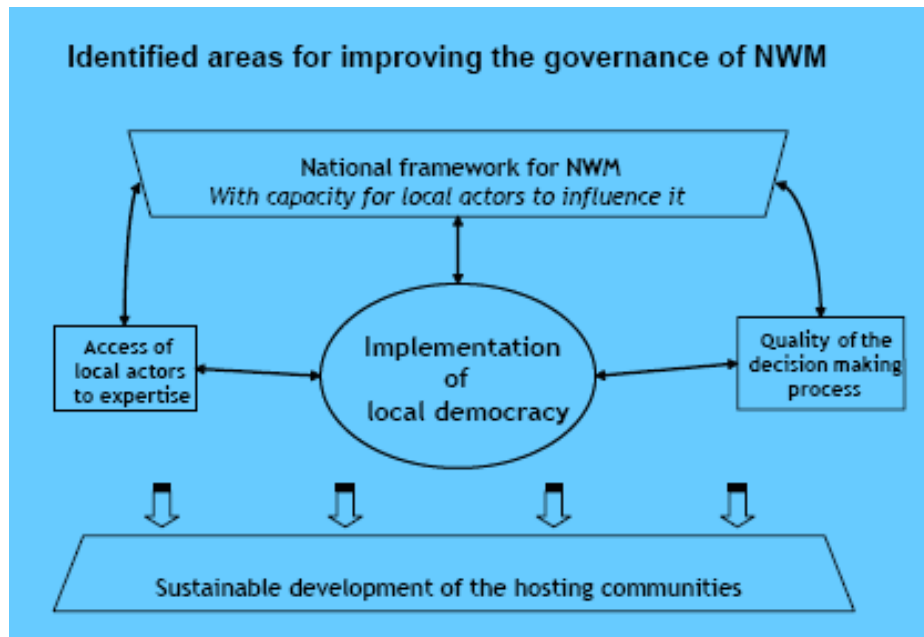


Figure 4: Areas for improving the governance of nuclear waste management, /COWAM 2003/

On each of the five issues /COWAM 2003/ presents the “lessons learned” and recommendations for the “way forward” that can be summarised as follows:

Local democracy:

- A necessary step for improving the governance of nuclear waste management, including the empowerment of local people and an active participation of the wider population.
- A means for the local government, local organisations and citizens to improve their understanding of the nuclear waste issue and its implications for the local community and to raise awareness among representatives of national authorities, and implementers about local concerns and projects.
- Can bridge the technical and the local dimensions and at make the local community a genuine partner in dialogue.

Recommendations for the way forward are:

- *Increasing clarity and transparency;*
- *Local democracy in practice:* Assuring that the ‘normal’ locally elected representative body should always have a decisive role, regarding a plurality of views as an asset;
- *Local partnership: enhancing local dialogue;*
- *Funding : giving matching resources to the local development plan*

Access of non-experts to expertise in the local decision-making process

- Striving for enhancement and improvement of the management of nuclear waste and the reduction of related uncertainties.
- Regarding pluralism of views and their integration in expertise as key elements

Recommendations for the way forward are:

- *Multidisciplinarity and plurality*: integrating the various dimensions such as technical, social, ethical, related to law, public health, or decision-making expertise; improving process quality by laying down and mapping all the different aspects of the issues
- *Making expertise a support to local democracy*: increasing local actors' level of understanding and their ability to interact with other involved people, enabling them to gain autonomy, self-confidence and awareness, and to develop their own understanding of the relevant available knowledge.
- *Partnership: enhancing local scrutiny*: Local partnership as appropriate tool to implement, enhance and control pluralism in expertise, having the mandate to scrutinise the waste management decision-making process.

Influence of the Local Actors on the National Nuclear Waste Management Framework

- Early involvement of local actors in the stage of discussion of a national policy.
- Extent of local influence on national decision-making process contributes to consistency and practicability of the overall waste management policy.

Recommendations for the way forward are:

- *A National Framework*: as a pre-requisite to a fair site selection process, involving (potentially) affected actors at the local and national levels.

Sustainable development in regions hosting nuclear waste management facilities

- The way the project is inserted in a broader regional social and economic project for the local community is of primary importance.
- Inventing new accompanying measures to enhance and support the long term development of the hosting community is necessary.

Recommendations for the way forward are:

- *Integration and development of the site within a regional development policy* which encompasses a prospective view on the future of the area;
- Developing a framework which sets out clear guarantees to local stakeholders.

The quality of the site selection process

- Considering economic and political factors though geology remains a main selection criterion;
- Giving sufficient time to progress.

Recommendations for the way forward are:

- *Criteria, methods and rules in the site selection process*: ensuring transparency and accountability;
- *Step-wise approach*: checking progress in an open process and clearing roles and responsibilities of the concerned actors at each stage.

COWAM 2 (2004 – 2006)

COWAM 2 is based on the experience and results of COWAM. The main objectives are

- to carry out a collective and inclusive dialogue on ways to improve decision-making processes in radioactive waste management at local and regional levels and
- to develop broadly based, validated and practical recommendations for implementation of improved governance processes in radioactive waste management.

Four working groups were established for the following focal points:

- Implementing Local Democracy and Participatory Assessment Methods
- Influence of Local Actors on the National Decision-making process
- Quality of Decision-making processes
- Long term Governance

The final report was terminated in October 2006 but is not available on the web-page /COWAM2 www/.

3.3 RISCOM II (2000 – 2003)

RISCOM II was a research project within 5th framework programme of the European Commission. The RISCOM model for transparency was developed earlier within a Pilot Project funded by the Swedish Nuclear Power Inspectorate (SKI) and the Swedish Radiation protection Institute (SSI) /RISCOM www/.

The RISCOM Model

The development of the RISCOM Model was influenced by the following experience:

- Decisions will improve in quality if it is made transparent to the public and the decision maker how the two general elements of complex decisions, technical/scientific and value-laden elements, interact.
- The roles of the different stakeholders/actors must be understood.
- Arenas should be available for actors and the public to be able to influence the programme.

The RISCOM Model includes three basic elements: technical/scientific issues, normative issues and authenticity, which are presented as the cornerstones in the RISCOM concept, which are all equally important and interconnected /Wene 1999/, /Hedberg 2003/, see Figure 5.

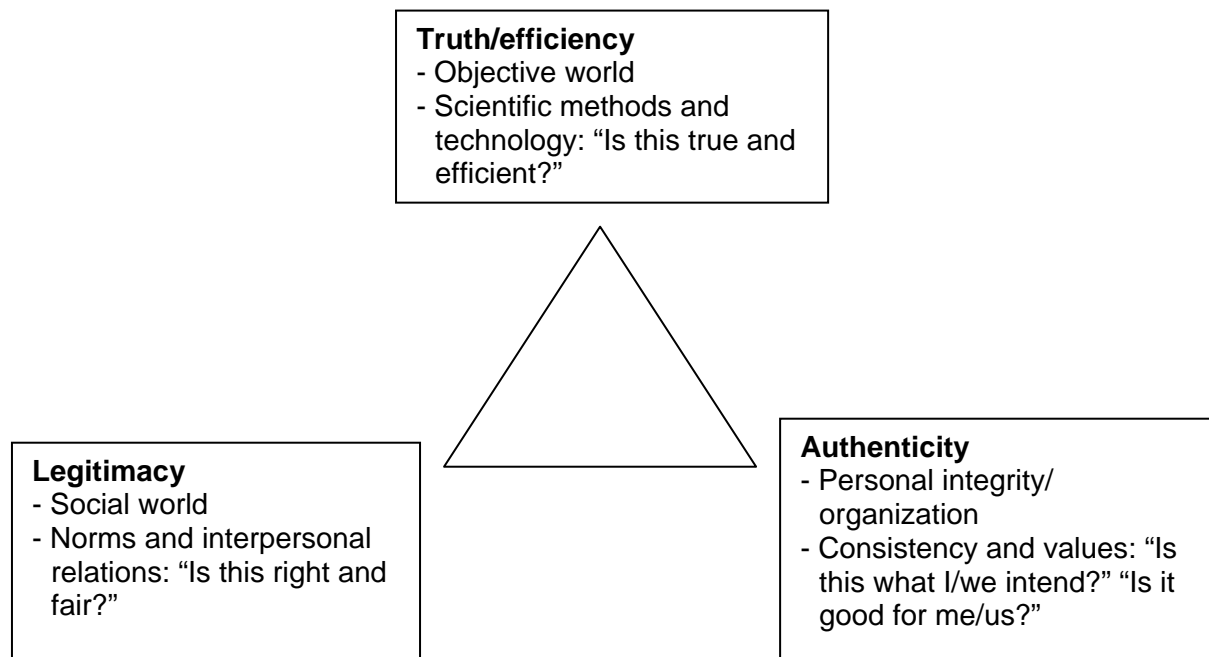


Figure 5: "Three roots of communicative action" used in the RISCOT Model /Wene 1999/

To achieve *transparency* there must be appropriate procedures (*transparency channels*) in which decision-makers and the public can validate claims of truth, legitimacy and authenticity. The procedures should allow "*stretching*", which means that the environment of the implementer (of a proposed project), the authorities and key stakeholders is sufficiently demanding and that critical questions are raised from different perspectives /NWMO 2004/.

Furthermore the "*levels of meaningful debate*" have to be considered in as an important organisational aspect of successful governance processes. Radioactive waste management includes different levels of discussion and decision, as the local level of potential site region, the national level, where the broader framework for managing the programme is set and a higher societal level, which decides on the waste management method to be applied /RISCOT 2003/.

Transparency is strongly linked with public participation: Transparency needs public involvement for "*stretching*" (see above) – and meaningful public involvement cannot take place without transparent organisational processes that provide for real influence /RISCOT www/, /RISCOT 2003/.

RISCOT II

The overall objective was to support transparency of decision-making processes in the radioactive waste programmes of the participating organisations, and also of the European Union, by means of a greater degree of public participation /RISCOT 2003/.

The results of RISCOT II, which are summarised in /RISCOT 2003/ cover the following four main issues:

Using the RISCOT Model:

The studies proved the applicability of the RISCOT Model in several cases e.g. in designing hearings and in developing criteria for public participation processes. This practical supported the general approach of the RISCOT Model on the one hand and illuminated specific demands for further development of the model.

Communication performance assessment

- Incorporating value judgements of stakeholder into performance assessment is necessary and can be achieved by starting assessments from the issues of concern among stakeholders and communicating with them during the assessment work.
- The “real experts” must engage themselves in communicating performance assessment (not leaving the job to communication departments).
- Integrating stakeholder values in regulatory standards should be achieved by including them in the developing stage.
- Experts must be truly open minded and willing to consider stakeholders concerns.
- Clarification is to be sought about factual versus value-laden domain of an issue to increase transparency.
- Assessment methods must be adapted to the needs that arise from integration of views and opinions of non-experts.
- Improving public understanding of performance assessment affords clear explanations why it is done, who it is for and how it fits into the decision making process.
- Comparison of alternative methods of waste managements may include value-laden considerations and ethical principles.

Transparency and consensus

- Transparency should enhance the quality of decision making as it leads to higher level of awareness of all aspects of the issue.
- A transparent and democratic decision-making process may not lead to consensus about a proposed project but it should be possible to present a coherent view of the impacts of the project.
- Quality of decisions is increased if the decision-makers and the public are aware of the different values, as well as the factual issues.

Public participation

- Information resources should be targeted carefully where they will be most useful such as establishing the context of the dialogue process and its role within any related decision-making process.
- The amount of detail of information and the kind of assessment that is necessary has to be adapted to the specific questions and balanced between the needs of the different groups.

- NGO representatives have the task to provide energy and competence to the “stretching” process. They are not to be seen as the publics' representatives but as a resource in the process to achieve transparency
- Stakeholders and the public must have options to evaluate the credibility of experts, especially in fields where they do not have the qualification to understand (very technical) issues in every detail.
- It must be clear how the dialogue process fits under the larger umbrella process in which it is embedded.
- Providing sufficient resources is necessary to allow for citizens' participation, and will encourage positive engagement, improve decision making and increase public confidence.
- Debates on alternatives as part of the decision making process are necessary.

3.4 RISKGOV (2002 – 2004)

The RISKGOV Project was part of the 5th Framework Programme of the European Commission. It was dealt with between 2002 and 2004 by an interdisciplinary team from six institutions from France Sweden and the UK under the coordination of CEPN (France).

The objective of the RISKGOV Project was to improve the governance of industrial activities giving rise to risks to people and the environment from radioactive and chemical discharges during normal operations. For this purpose, the goal of RISKGOV was

- to analyse and compare the elements contributing to the quality of governance systems associated with environmental discharges from nuclear and chemical installations, and
- to provide a set of criteria to characterise and to assess the quality of governance of risk activities on the basis of case studies and expert knowledge /RISKGOV 2004b/.

Focusing on good risk governance can enhance the competitiveness of the European nuclear industry (and industry more generally) by promoting the development of decision-making and information systems

- which are characterised by openness and trust and
- which therefore increase the chances of resources being used safely, effectively and efficiently
- with a high degree of acceptance.

The main results of the RISKGOV Project are summarized in /RISKGOV 2004a/:

- The “*process elements*” (inclusiveness of participation and of issues; collective and mutual learning) are seen as vital components that must be dealt with from the outset.
- They support the emergence of a “*governance culture*” that is well adapted
 - to deal with complex problems,
 - respond to forthcoming issues, and
 - meet societal expectations regarding the governance of risk issues.

- “Governance culture” comprises clarity about nature of the process, multi-level governance, quality of partnership and resilience.
- The overall process is concerned with learning and adaptation to emergent issues. This means that “*evaluation*” is a vital component, which provides feedback about its success and/or the need for improvement. This allows for
 - the re-initiation of the process, and
 - its’ understanding as iterative, adaptive and evolving rather than as linear and deterministic.
- Insofar as a risk governance process operates in this way, the proposed scheme suggests that there is a higher probability of achieving or at least moving closer to the objectives of *trust and confidence*, *acceptance and acceptability* of decisions and *sustainable development*.

The interaction of the main governance features, derived from case studies as a general framework are presented in Figure 6 taken from the final report /RISKG0V 2004c/:

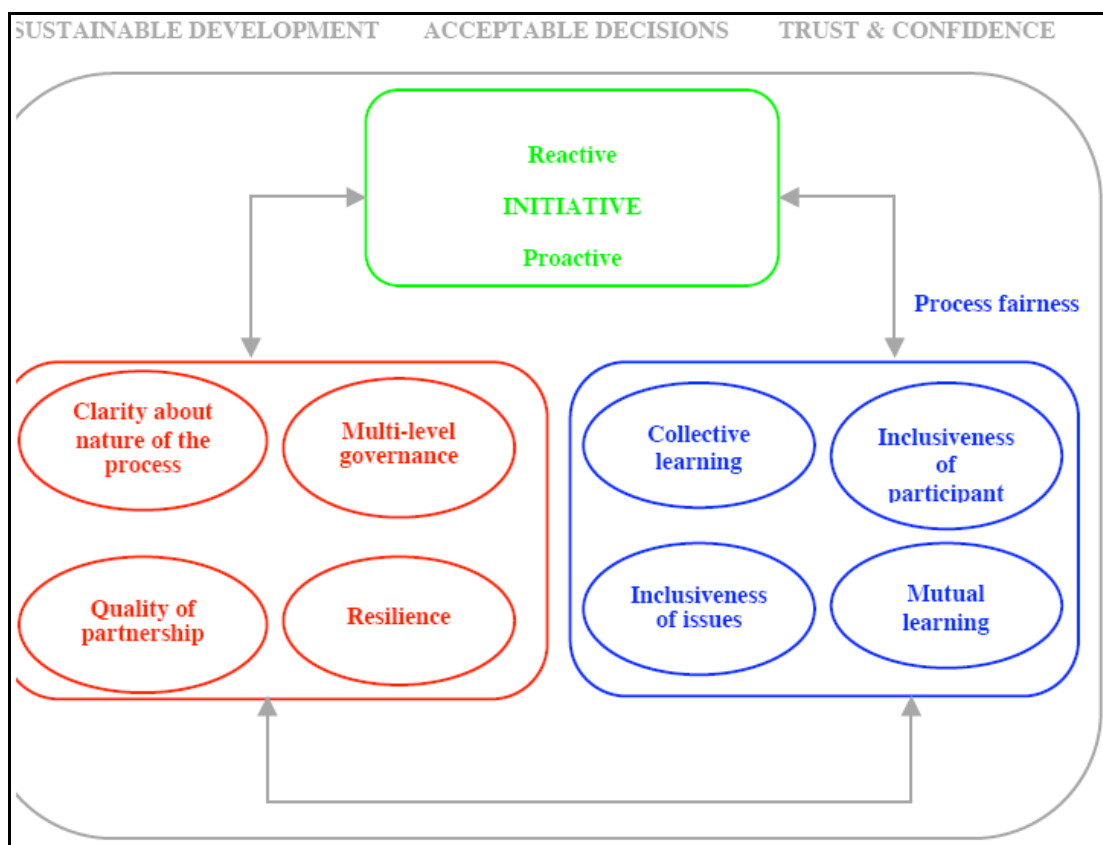


Figure 6: A framework for the evaluation of risk governance processes, /RISKG0V 2004c/

3.5 CETRAD (2004 – 2005)

CETRAD was a “Coordination Action on Education and Training in **R**adiation Protection and Radioactive Waste Management” funded by the European Commission under the 6th framework programme.

The focus of this project was on the current status and future needs of European countries in the field of education and training with regard to their respective waste management programmes. In so far the project deals with the important aspect of competence building which is of high relevance for governance processes. As CETRAD does not address aspects of governance models in the more comprehensive manner it will not be treated in this report in detail. But it will be considered in the further work packages of OBRA, especially WP 3.

3.6 CARL (since 2004)

CARL is a “cross-national social sciences research project”. The project unites four types of partners: Citizen stakeholders, Agencies responsible for radioactive waste management, social science **R**esearch organizations and **L**icensing and regulatory authorities. The consortium currently consists of organisations from four countries: Belgium, Slovenia, Sweden and the UK. Participants from Canada and Finland joined the project for restricted time. The project is co-sponsored by the agencies for radioactive waste management of the countries involved, by the Swedish regulators and by the participating stakeholder groups /Bergmans 2006/.

The CARL project shall serve as a platform for:

- interaction and collaboration;
- the maintenance and development of networks for the exchange of experiences and ideas;
- stakeholder empowerment; and
- comparative social science research and mutual learning.

In particular, it will examine:

- the relationship between the principles and practices that have characterized stakeholder involvement initiatives in radioactive waste management (and in other relevant decision-making arenas) and their outcomes;
- the integration of such initiatives with technical programs in radioactive waste management;
- the influence of contextual (historical, social, political) factors on the significance of particular participatory initiatives and their outcomes. /CARL 2004/, /CARL www/.

Research is taking place on two layers which have been established within the project as shown in Figure 7.



Figure 7: The two layered structure of the CARL project, /CARL 2004/

The CARL project is divided into four phases:

- Phase 1: Recording the legal framework of formal national and international requirements for stakeholder involvement in decision making relating to radioactive waste management, and developing a common framework for country reports in phase 2.
- Phase 2: Conducting national case studies, investigating the desires and requirements of different stakeholders for involvement in the decision making process.
- Phase 3: Integrating the results of phase 2 to develop indicators that could show and improve the quality, robustness and sustainability of decisions concerning radioactive waste management within each participating country.
- Phase 4: Evaluation.

Latest results of the CARL project are published in the "First Comparative Report" /CARL 2006/. It is based on the findings regarding the respective national radioactive waste management programmes in the countries involved. These are documented in six country reports of the year 2006.

Major findings can be summarised as follows:

1. The concerned parties:

- The basic typology from the outset of CARL which identifies RWM agencies, citizen stakeholders and regulatory bodies as major actors in (participatory) RWM processes might not be sufficient.
- Besides the fact that there are different types of the major actors mentioned above, the country reports reveal a range of other parties which are, could or should be involved, e.g.: electricity companies, government departments and agencies other than the licensing and regulatory authorities, cabinet ministers at national and (sub)regional level, municipal

governments (in the sense that they sometimes have tasks and responsibilities that go beyond a role as local citizen stakeholder), a broad range of experts, mediators, NGOs.

- Points of discussion and research in the subsequent phase of the CARL project are derived:
 - To map out the larger network of stakeholders, parties concerned, or communities of interest, following key-questions: (1) Who are the (legitimate) stakeholders for decision-making and according to who's standards? (2) Are or should all stakeholders be considered equal within the process of decision-making?
 - To elaborate further on the notion of “communities of interest” that was introduced in the Canadian country report in order to work out if it is conceptually of more use than the notion of “stakeholder”.

2. International and national standards

- The country reports reveal that the problem definition (waste identification) as well as the proposed solution (how to deal with these wastes) to a large degree comes about within each national context.
- Contextual factors such as local geology, population density, industrial infrastructure and national attitudes play a decisive role in how radioactive waste is managed. Overall international standards are defined on a very general level and are difficult to establish.
- A typology of contextual factors might consist of three categories: socio-political factors, socio-technical factors and physical factors:
 - The relationship between participatory RWM processes and the legal and institutional frameworks as well as the role of government are aspects which have to be looked at in more detail in the *socio-political* field.
 - The size of the nuclear programme and the origin of waste, the relative success of problem solving in RWM so far as well as the financing mechanisms for RWM are relevant *socio-technical* issues that may contribute as contextual factors.
 - *Physical factors* (geology, hydrogeology or climate, population density and the degree of urbanisation and the country's spatial structure) influence realistic options of RWM and therefore have also be considered as contextual factors.

3. From a technical to a socio-technical framing

- Generally a shift in framing from a technical to a socio-technical approach can be identified, but this is not in all cases a steady development and does not comprise all issues of radwaste management.
- Major crises and events seem to lead to cross-national reactions but it is striking that similar crises in RWM emerge in several countries in spite of international exchange of information and experience.
- Multiple factors influence the identification and self identification of local stakeholders in the affected regions. A detailed evaluation is necessary.
- There are different ways of dealing with social and technical aspects in a more separated or more integrated manner. The question, how all aspects can be addressed best has to be solved.

- The involvement of lay people should not be reduced to social aspects but they should also be given the opportunity, the resources and particularly the time to gain insight into the technical aspects - no matter what their particular influence on the decision making in technical issues will be.
- There are social and technical perspectives of safety which can not be separated as they are two sides of the same coin. The influence of participatory processes on the social perspective of safety has to be further elaborated on.

Summarising, the next phase of the CARL project will deal with a further elaboration of the different types of interested parties and a mapping out of the full 'radwaste network' (both on the national levels and on the international level). This work will be based on interviews with key players in radwaste management. A set of questions concerning the three main topics listed above will be developed as a guideline for the interviews /CARL 2006/.

4. Analysis of Findings and Success Factors

4.1 Synthesis of the results of the analysed projects:

The six European projects, which have been briefly described in chapter 3. show a wide range of methodologies to approach to a model of governance on radioactive waste management. But they show high correspondence in terms of

- the general features of good governance processes (e.g. empowering and engaging the affected stakeholders and public, early involvement of the regional level, competence building, supporting the development of mutual trust, ensuring adequate resources) and
- the overarching principles which should guide the efforts for successful governance (e.g. legitimacy, transparency, trust and confidence, acceptance, local democracy and sustainable development).

However the governance models or the features of governance models presented in the different studies are developed under the specific focus of the different projects. With regard to a synthesis of the results one has to consider, that they do not follow a common structure as a baseline for the development of governance features.

The following structure for key elements of successful governance is suggested to allow for a systematic categorization of the core elements developed in chapter 2.2 and of the additional issue arising from the analysis in chapter 3:

1. Overarching principles of governance
2. Prerequisites of regional governance processes
3. The organizational framework
4. Core activities

On this basis, the preliminary set of success factors presented in chapter 4.2 is derived.

4.2 Preliminary Set of Success Factors

The following composition of key elements of governance processes is based on the analysis of socio-scientific theories, different practical approaches in the field of nuclear and non-nuclear potentially hazardous activities and infrastructure planning, and a synthesis of results from relevant EC-governance projects. It shall serve as a guideline and preliminary set of success factors for the development of the OBRA platform.

In applying the success factors – mainly the overarching principles – to the development of the OBRA platform, two action levels have to be considered:

1. *The level of the OBRA activities:* The activities that are planned and implemented on the OBRA platform should be adjusted to the needs of good governance processes in the affected regions.

2. *The level of OBRA culture:* The way OBRA itself is organised, works and interacts with stakeholders should be geared to the principles of good governance and ensure participative development.

1. Overarching principles of good governance

- a) *Legitimacy* of the process and the decisions;
- b) Following the aim of *fairness* so that all parties and the public in a broader sense benefit from the cooperation;
- c) Ensuring *transparency* of the process;
- d) Enhancing *quality* of decision making;
- e) Supporting positive economical, ecological and societal *development of the region* affected of planned measures/installations.

2. Prerequisites of regional governance processes

- a) Sufficient resources for all necessary activities and all stakeholder groups;
- b) A supporting national policy and framework setting;
- c) Strong interaction between the national and the regional governance level;
- d) Integrating institution(s) with a high degree of public trust in the implementation phase.

3. The organisational framework

- a) Institutionalised regional cooperation based on four main activities:
 - i) An agreed target and understanding of perspectives and goals of all actors;
 - ii) Regularly working context assuring integration of all relevant stakeholders with clear accountabilities;
 - iii) Inclusive working context assuring integration of all relevant issues;
 - iv) Overall, coordination of the whole process (e.g. by institution of an intermediary) assuring focussing and transfer of results.
- b) Integration of the governance process into the formal decision-making procedure;
- c) Transparent roles and responsibilities of all actors – in general – and a clear definition of the specific stakeholders' roles in the decision making process.

4. Core activities on the regional level

The core activities can be defined in three main areas. On one hand the development of a *common vision* about the economical, ecological and societal requirements of the region has to be implemented. To tackle that, one has to create a common *knowledge base* among all concerned actors. Therefore one of the main prerequisites of a mutual understanding is the *exchange of information* and an ongoing communication process.

4.1 Development of a shared governance culture

- a) Iterative participatory goal formulation regarding the economical, ecological and societal development (with respect to the planned measures/installations) consisting of:
 - i) Clarity about the nature of the process;
 - ii) A common vision of all relevant stakeholders;
 - iii) Agreed indicators;
 - iv) Evaluation of next steps.
- b) Early integration of all affected individuals and groups;
- c) Promoting mutual understanding and confidence.

4.2 Participatory knowledge acquisition and capacity building based on:

- a) A system of working groups supporting joint learning and the development of know-how;
- b) An adequate structure of the working groups that allows a high level of information exchange;
- c) Access to expertise for all stakeholders.

4.3 Continuous exchange and communication

The implementation of a continuous communication with the involved actors' network as well as with the local and regional media should allow for the flow of and access to information through different channels of communication:

- a) The use of media should focus the different target groups in their informational routines and in an adequate language;
- b) Dissemination of knowledge from working groups to the common public has to be assured by official representatives as well as by the involved laypeople.
- c) In addition, word-of-mouth information is the base for the distribution of "trusted" information;
- d) Success – in the meaning of technical and organisational implementation – could be ensured by integrative persons (promoters) with a high level of trust.

It is recognised that the realisation of the – so far transferable – success factors in developing and implementing the OBRA platform is a major challenge, on the OBRA-action level as well as on the OBRA-culture level. As regards the action level, one has to be conscious that the OBRA platform does not constitute a complete governance process. Nevertheless, the aim should be to integrate as many of the key elements as possible into the network activities of the OBRA platform.

5. References

- /AkEnd 2002/ Arbeitskreis Auswahlverfahren Endlagestandorte AkEnd: Site Selection Procedure for Repository Sites – Recommendations of the AkEnd – Committee on a Site Selection Procedure for Repository Sites; December 2002
- /Bergmans 2006/ Bergmans, Anne: Introducing CARL – Studying Stakeholder Involvement in Decision-Making on RWM; Proceedings, VALDOR Symposium Stockholm, May 2006
- /Brohmann 2006/ Brohmann/Hünecke/Fritsche: Case Study – The Bioenergy Village Jühnde. Create Acceptance. Work package 2; 2006
- /CARL 2004/ CARL-proposal 3-2004: CARL a pilot social science research project to establish benchmarking opportunities for stakeholder involvement in radioactive waste management. proposal version: 11/10/05
- /CARL 2006/ CARL – First Comparative Report. Towards a typology of “Stakeholders” in RWM. April 2006. Editor: Anne Bergmans
- /CARL www/ CARL: A social science research project into the effects of stakeholder involvement on decision-making in radioactive waste management (RWM), homepage <http://www.carl-research.org> (reference date 12.01.07)
- /COWAM 2003/ COWAM Network: Nuclear Waste management from a local perspective, Reflections for a better governance, Final report, November 2003
- /COWAM2 2003/ Sixth Framework Programme, Euratom [Improving the governance of geological waste disposal], Contract for : Specific Targeted Research or Innovation Project: Community Waste Management 2 – Improving the Governance of Nuclear Waste Management and Disposal in Europe (COWAM 2), Annex 1: Description of work, 31.10.2003
- /COWAM2 www/ COWAM 2, homepage <http://www.cowam.org> (reference date 09.02.07)
- /Dubreuil 2004/ Dubreuil, Gilles Hériard, et. al.: Local Communities in Nuclear Waste Management: The COWAM European Project; contribution to EURADWASTE 2004
- /EC 2006/ European Commission – Energy Research: COWAM-2; Internet publication under http://europa.eu.int/comm/research/energy/print.cfm?file=/comm/research/energy/fi/fi_cp_a/waste/article_2525_en.htm; (reference date: 15.12.06)
- /Edgar 2006/ Edgar/Marshall/Bassett: Partnerships: Putting Good Governance Principles in Practice; 2006
- /Enviros 2006/ Enviro: Contract for Coordination Action within 6th Framework Programme – EURATOM Management of Radioactive Waste. Annex 1 – “Description of Work” – European Observatory for Long-term Governance on Radioactive Waste Management. OBRA. No. FP6-036473; 28. September 2006
- /EU 2001/ EU-White Paper: COM 428fin., European Governance; 2001
- /EU undated/ Europa Glossary: Governance
- /Ffm 2000/ Mediationsgruppe: Dokumentation zum Mediationsverfahren Flughafen Frankfurt am Main; Wiesbaden 2000
- /FSC 2004a/ Organisation for Economic Co-operation and Development / Nuclear Energy Agency (OECD/NEA): Learning and Adapting to Societal Requirements for Radioactive Waste Management - Key Findings and Experience of the Forum on Stakeholder Confidence, NEA No. 5396, OECD, Paris, 2004

- /FSC 2004b/ Organisation for Economic Co-operation and Development / Nuclear Energy Agency (OECD/NEA): Stepwise Approach to Decision Making for Long-term Radioactive Waste Management - Experience, Issues and Guiding Principles, NEA No. 4429, OECD, Paris, 2004
- /Hedberg 2003/ Björn Hedberg. A Broader Perspective on Risk and Radiation Protection Criteria, Using the RISCOP Philosophy. Proceedings, VALDOR Symposium Stockholm, June 2003
- /IoG 2006/ Institute on Governance, Tim Plumptre: What is Governance? 2006
- /Öko-Institut 2006/ Öko-Institut e.V.: Anforderungen an die Gestaltung der Öffentlichkeitsbeteiligung im Endlagerauswahlverfahren - Konzept zur Ausgestaltung der Öffentlichkeitsbeteiligung; Abschlussbericht, Teil A, draft version 22 November 2006
- /PHA 2006/ Public Health Agency of Canada: Partnership with the Voluntary Sector. Glossary of Terms; 2006
- /QUB 2004/ Queen's University Belfast, Institute of Governance: Integrative Governance in Northern Ireland; 2004
- /RISCOP www/ RISCOP II homepage: <http://www.karinta-konsult.se/RISCOP.htm> (reference date 15.12.06)
- /RISCOP 2003/ RISCOP II Final report. Transparency and Public Participation in Radioactive Waste Management. SKI Report 2004:08. October 2003
- /RISKGOV 2004a/ Comparative Analysis of Risk Governance for Radiological and Chemical Discharges of Industrial Installations. Publishable Abstract. CONTRACT N°: FIKR - CT - 2001 – 00168 European Commission FP5 - Radiation Protection Research Programme; June 2004
- /RISKGOV 2004b/ Centre d'Étude sur l'Évaluation de la Protection dans le domaine Nucléaire (CEPN): Comparative Analysis of Risk Governance for Radiological and Chemical Discharges of Industrial Installations. Introduction of the project under www.riskgov.com (reference date: 15.12.06)
- /RISKGOV 2004c/ Comparative Analysis of Risk Governance for Radiological and Chemical Discharges of Industrial Installations. Final Report. CONTRACT N°: FIKR - CT - 2001 – 00168 European Commission FP5 - Radiation Protection Research Programme; June 2004
- /TIA www/ TRUSTNET in Action, homepage www.trustnetinaction.com (reference date 15.12.06)
- /Trustnet 1999/ TRUSTNET Secretariat: TRUSTNET Framework: A New Perspective on Risk Governance, September 1999
- /Trustnet 2004/ European Commission: Towards Inclusive Risk Governance - TRUSTNET 2. Work carried out under the European Atomic Energy Community R&T specific programme 'Nuclear energy, Key action 2: Nuclear fission 1998-2002' Area: 'Radiation Protection' by the TRUSTNET project co-ordinated by MUTADIS; EUR 21024/1; 2004
- /UNDP/ undated United Nations Development Programme: Governance for sustainable human development: Glossary of key terms
- /Wene 1999/ Clas-Otto Wene, Raul Espejo: A Meaning for Transparency in Decision Processes, Proceedings, VALDOR Symposium Stockholm, June 1999