

## **Local Stakeholder involvement in the perspective of nuclear waste management: Lessons from the COWAN network**

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**Abstract.** The management of high level radioactive waste is nowadays recognised as a complex decision-making where no solution can be reached solely on the basis of technical considerations. While this issue is acknowledged as a problem for the community as a whole, waste management remains a global problem looking for a local solution. Starting from this view, COWAM network (Community Waste Management), developed under the Fifth Framework Programme of the European Commission, addressed the following objectives: 1) To empower local actors through a networking process; 2) To gather and discuss the available experiences of decision-making processes at the local level within their national context in Europe; 3) To set up an arena for balanced exchanges between local actors, NGOs, regulators and implementers; 4) To promote new approaches to decision-making in national contexts in Europe. COWAM network comprises 230 delegates from 10 European countries, involving in priority local communities and NGOs. The emphasis put on the local participation enabled members of COWAM network to overcome distrust and to build common lessons and views beyond usual stakeholder positions. Through the analysis of case studies different issues were identified, among them two relate more specifically to expertise and environmental quality in the long term and sustainable development.

During the 1990s, nearly every national nuclear waste programme met many difficulties. There may have been awareness that nuclear waste management was more than a technical issue but there was little experience how to deal with the social aspects in general and the local opposition in particular. Local communities were only involved in the last stage of the decision-making process when almost all components of the decision were already fixed and local opposition was mainly seen as something that had to be overcome by information. The management of high level radioactive waste is now recognised as a complex decision-making process entailing technical, ethical, social, political and economic dimensions where no solution can be reached solely on the basis of technical considerations. While this issue is acknowledged as a problem for the community as a whole, a major dimension in radioactive waste remains the fact that waste management is a global problem looking for a local solution. It has become more and more clear that there is an increasing need to have society, and notably directly concerned local people, involved in the decision-making process. For any solution, a sound contract between the national community and a local community is a pre-requisite. To reach such a contract, there is a need for an open process where the project can be influenced by various stakeholders. It is becoming recognised that it is only through mutual trust between national and local stakeholders that nuclear waste systems can be developed.

### **1. BUILDING THE PROJECT: MEETING A GROWING NEED FOR LOCAL INVOLVEMENT**

Starting from this view, a group composed of representatives of a local community (Oskarshamn, Sweden), national authorities (HSK in Switzerland and the special advisor to the Swedish Government on nuclear waste issues), the French nuclear implementer (ANDRA), and experts from Belgium

(SCK·CEN), France (Mutadis, CEPN) and UK (NRPB) prepared and proposed a project to the EC Research Directorate in 1999 with the objective to improve the decision-making process in nuclear waste management at the local and regional levels. The project was named COWAM, which stands for Community Waste Management. It was accepted as a European Concerted Action within the 5th Framework Programme of the European Commission. It was designed as a 3 year collective reflection process (2000-2003) to be developed in 4 seminars, each one being located in a local community involved in COWAM. Coordination and management were ensured by Mutadis.

At its first meeting, the Steering Committee felt that there was a real need to address the issue of decision-making processes regarding nuclear waste management directly from the local point of view. It was therefore decided to give COWAM additional goals, and to make a specific effort to give European local communities and NGOs the opportunity to represent their own views in COWAM, and to create favourable conditions for local communities to network at the European level. The first year of the programme was devoted to the setting up of the network. The second year started in September 2001 with a seminar in Oskarshamn, which was the first European platform of dialogue for local communities and NGOs involved in nuclear waste management. Other seminars followed: Verdun (France) in February 2002, Fürigen (Switzerland) in September 2002, and Cordoba (Spain) in March 2003.

The initial resources could only cover part of the organisation of seminars (besides project management). In accordance with the pluralistic and local dimension set for COWAM, the seminars were thus co-organised and co-sponsored by COWAM and the hosting local government or organisation (namely: Oskarshamn municipality for the first seminar; Conseil Général de la Meuse and Comité Local d'Information et de Suivi (CLIS) for the second one; Genossenschaft für nukleare Entsorgung Wellenberg (GNW) for the third one; Asociación de Municipios en Áreas de Centrales Nucleares (AMAC) for the fourth one). About two-thirds of the seminars' budget<sup>1</sup> were supported by the hosting organisation with an additional contribution from national sponsors (SKI, SSI, Swedish Ministry of Environment, SKB; ANDRA; the Swiss Federal Office of Energy; AMAC, Consejo de Seguridad Nuclear and ENRESA), the other third was supported by EC funding.

## 2. COWAM OBJECTIVES

Taking into account the shift toward a stronger involvement of local communities, the COWAM project has widened its objectives:

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.

While enhancing networking between local communities and NGOs, a major task of COWAM was 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. Thus, the continued dialogue of local communities and NGOs with regulators, implementers and experts over three years was key to developing recommendations.

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<sup>1</sup> Except for the Cordoba seminar, which was fully supported by Spanish funds.

## 2.1 COWAM network

The COWAM network has been successively built up around the seminars and currently comprises 230 delegates from 10 European countries: Belgium, Czech Republic, Finland, France, Germany, Slovenia, Spain, Sweden, Switzerland, UK. Thirty local communities<sup>2</sup> are involved in the network. Local communities and NGOs represent 65% of the audience, the remaining 35% are delegates from national authorities (10%), implementers (18%), experts (7%). This network reflects the need both to strengthen local stakeholders' involvement in nuclear waste management, and to build a shared understanding with others, i.e. national authorities and implementers.

## 2.2 Methodology

COWAM activities were supported by a three-tier methodology: case studies involving presentations from different interest groups, single-interest working groups and mixed interest recommendation groups.

The COWAM seminars were structured to allow each of these to occur. Each seminar offered a major opportunity to review actual case studies in different local and national contexts: Sellafeld in UK, Tierp and Oskarshamn in Sweden, Görleben in Germany, Bure in France, Wellenberg in Switzerland, the Spanish situation, and the Mona, Stola and PaLoFF partnerships in Belgium. The novel aspect of these case studies was the fact that they were presented by various people coming from different positions and playing different roles in the decision-making process: local communities, NGOs, implementers, experts, and public authorities.

The case studies were then discussed in ten single-interest working groups. *Single interest* means that at this stage local communities and NGOs were not mixed with public authorities and implementers. This fact was important for the success of the seminars as discussions could take place between "colleges" where experience could be effectively shared and critical analysis of the presented case studies could be formulated. The groups reported their conclusions in front of the wider audience at the end of each seminar. On the basis of the reports presented by the working groups a Framing Paper was prepared by the coordinator in interaction with the steering committee<sup>3</sup>. This paper identified important issues for discussion in the Recommendation Groups.

Unlike single-interest groups, the eight Recommendation Groups each comprised representatives of local communities, NGOs, implementers, regulators and experts. They met a total of three times: in Verdun (March 2002), Fürigen (September 2002) and Cordoba (March 2003). They issued recommendations, which as far as possible reflect shared views among the various members of the group. The full reports of Recommendation Groups are available at: <http://www.cowam.com>. A summary of the main conclusions is presented in the next section.

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<sup>2</sup> "Community" here is used in the general sense of the word and refers to the local population of a given area. The communities in COWAM are represented either by local governments (municipalities, cantonal, district or regional government), by local commissions or local groups (quite often gathering together elected representatives, citizens, representatives of local industry, trade-unions, and experts), or by citizens.

<sup>3</sup> The Steering Committee comprises the group which proposed the project to the European Commission, and additional delegates, notably from countries who were not first represented in the Committee, as permanent guests (\*). The Steering Committee members are: Harald Åhagen (Oskarshamn, Sweden), Detlef Appel\* (PanGeo, Member of AkEnd, Germany), Thomas Flüeler\* (ETH-Zurich, Switzerland), Gilles Hériard Dubreuil (Mutadis, France, project co-ordinator), Emil Kowalski\* (GNW, Switzerland), Yves Le Bars (ANDRA, France), Shelly Mobbs (NRPB, UK), Bernard Neerdael (SCK-CEN, Belgium), Serge Prêtre (formerly HSK, Switzerland), Thierry Schneider (CEPN, France), Olof Söderberg (Special Advisor on nuclear waste to the Government, Sweden), Mariano Vila d'Abadal\* (AMAC, Association of Municipalities with NPP, Spain). The Steering committee was assisted by Serge Gadbois (Mutadis, COWAM secretariat).

### 3. RESULTS

The recommendation groups developed conclusions on the five following issues:

- Local democracy
- Expertise in the local decision-making process
- Influence of the local involved people on the national nuclear waste management framework
- Sustainable development
- The site-selection process.

This paper gives some insights on the conclusions for two issues which provide elements on expertise and radiation protection of the environment (sustainable development).

#### 3.1 Expertise in the local decision-making process

##### 3.1.1 *Questions at stake*

Among the issues to be considered in radioactive waste management are the more technical ones as, for instance, the performance and safety assessment, the impact assessment, the details of the technical options, etc. Expertise on these issues often raises suspicion amongst those stakeholders not directly involved in assessment studies. Expertise is often presented as exclusively fact-based. However the technical assessments and nuclear waste management concepts are in practice filled with many other than scientific dimensions such as values, ethical positions, cultural presuppositions, trade off, etc. In the past years, the role of the experts was emphasised and the non-technical dimensions were neglected or dealt with by experts and decision-makers without being explicitly exposed and debated. Confrontations of views took place in the field of expertise, although the issues involved were raising a broader set of social and political questions. Experts' accountability and trustworthiness were questioned. Public confidence and social trust were affected.

The challenge is therefore to bring the necessary expertise into the decision framework without impeding the democratic process. It is also to make sure that the concerns and non-technical dimensions are properly taken into account in the expertise. Do non-experts have the necessary skills to take part in the discussions? Do they have to become experts for entering the expertise? Is the public a threat to expertise or a possible resource? Is it possible to bring the non-experts in the expertise? How to make explicit the non-scientific dimensions necessitating a democratic debate (as well as other types of expertise)? How can the non-experts appropriate the available knowledge? How can experts assist the democratic process while not hijacking it?

##### 3.1.2 *Lessons learned*

COWAM groups came up with a shared view on the goals of expertise in the governance of nuclear waste management.

The primary goal of knowledge generation is the enhancement and improvement of the management of nuclear waste and the reduction of related uncertainties. In this respect a fundamental contribution of expertise is that it makes apparent what is known and what is unknown in a given context. It reveals the boundaries of knowledge, which it is essential to be aware of in view of making an informed decision.

There is strong expectation that expertise can be improved in such a way that it would convey trust in the decision-making process. Trust is a result of confrontation of views within a transparent clearly defined dialogue framework. It is the outcome of a process where trustworthiness of the persons and institutions in charge and of the procedures has been experienced through.

### 3.1.3 Ways forward

*Multidisciplinarity and pluralism* of views and their integration in expertise are key elements in this perspective. Because knowledge does not just “objectively” exist but is interest-bound, expertise that is independent of the applicant has to be built up to reach a pluralistic perspective. The expertise involved in nuclear waste management shouldn't be limited to geological studies and safety assessment. Complex topics require various and diverse approaches to problem solving. The various dimensions of the issue, be they technical, social, ethical, related to law, public health, or decision-making expertise should be unveiled. Likewise, as expertise unfolds, the various viewpoints on each issue should emerge, reflecting the concerns of the different actors. Multi-disciplinarity and plurality of views in nuclear waste management should significantly contribute to the quality of the process by laying down and mapping all the different aspects of the issues that request attention. This implies *involving experts originating from different organisations* (public bodies and agencies, regulators, so called independent experts, implementers) in order to ensure an as broad as possible diversity of views. Secondly, the *involvement of non-experts* in expertise is essential to link the technical project with an existing natural and social setting. Inhabitants have a local knowledge of their land since they live more closely to a given reality in a given place, and they are able to complete the technical expertise with data, which are specifically known by the community, and are relevant for the development of the project in that particular place. The involvement of non-experts can be carried out through the creation of a local partnership, with specific resources from the local and national authorities. Moreover the involvement of non-experts contributes to link the questions discussed in expertise with local stakeholders' practical and ethical concerns.

In this respect, a specific role of expertise was highlighted in *supporting local democracy* and local actors' involvement in nuclear waste management. Expertise is expected to help local actors in analysing impact and performance assessment, raising questions and making comments on these assessments and other relevant issues (notably non technical), identifying remaining questions as regards technical data, as well as social, environmental and technical issues. This of course increases their level of understanding and their ability to interact with other involved people. Furthermore, this access to knowledge enables them to gain autonomy, self-confidence and awareness, and to develop their *own* understanding of the relevant available knowledge.

## 3.2 Sustainable Development

### 3.2.1 Questions at stake and long term issues

The socio-economic dimension to the siting of a radioactive waste management facility is, in some countries, seen merely as an issue of compensation. However, this would appear to be a narrow interpretation of the problem since it is difficult to imagine any nuclear facility being constructed without an in-depth consideration of the positive and negative impacts on the region concerned and of local sustainable development in general. The integration of the plans for the site within a regional development policy that considers the future of the whole area is seen as a key element in improving the governance of radioactive waste management in the short as well as the longer term.

Should the project support the local development, or should it be integrated in a wider development perspective? Compensation appears as a narrow approach to the siting issue when it comes to local development. How to build more ambitious socio-economic projects to integrate the technical facility in a regional development policy?

### 3.2.2 Lessons learned

As shown by the work of the AkEND group on site selection procedure in Germany, when considering the siting of a nuclear waste management facility, the way the project is inserted in a broader regional social and economic project for the local community is of primary importance. The unique feature of

nuclear waste management is indeed its duration, and the uncertainties regarding technical, environmental, economic, social and political evolutions. New accompanying measures need to be invented to enhance and support the long term development of the hosting community. According to this view, compensation, should it remain, would only be a part of a broader global development plan aiming at a better integration of the facility in the local economy. Compensation practices are specific to each country, but the questions they raise are well known. Conversely, the long term regional development is stressed as an important new issue which deserves greater attention since there are very few — if any — hazardous facilities which are already associated with such a long term dimension.

### *3.2.3 Ways forward*

The integration and development of the site within a regional development policy, which encompasses a prospective view on the future of the area are seen as a key factor to improve the governance of nuclear waste management in the short as well as in the longer term. The development of a facility should be seen at local level as a positive project linked in with the future and long term sustainable development of the region as a whole. Therefore local stakeholders should be consulted on their view of the future of the region and will need to participate in and have control over the way in which the facility develops. A good vision for the region would be one that will get support because it is of benefit to the nation and the local sustainable development.

Ethical concerns require a framework, which sets out clear guarantees to local stakeholders. This framework must be acknowledged and shared by all the stakeholders. It should build on a sustainable development approach, taking into account:

- alternative or complementary economic activities
- the long-term monitoring and awareness of hosting communities
- social, economic, environmental, health and legal issues
- not only the operation phase but also the surveillance over long periods
- sustained capacity to take action in the future (e.g. retrievability).

## **4. CONCLUSIONS AND PERSPECTIVES**

The COWAM European concerted action carried out a collective and pluralistic reflection on the way to improve the decision-making processes related to radioactive waste management facility siting and operation. It looked at the local and regional levels while taking into account the specific national, cultural and historical contexts of European Member States. A characteristic of COWAM was to base its approach to this problem primarily around the point of view of the local and regional communities currently or potentially concerned by the siting and operation of radioactive waste management facilities. A pluralistic and interdisciplinary European COWAM network has thus been created involving key local and regional actors, as well as a panel of implementers, regulators and experts in the field.

The work achieved in COWAM so far has shown that local people and representatives are interested in playing an active role in the discussions on nuclear waste management issues. Thirty local communities have participated in the network, and some of them have made a direct contribution to the programme by hosting and co-sponsoring a seminar. The views of the local people involved indicate that concentrating on purely technical factors – such as differences between types of waste or between management options – does not deal with the issues of initial interest to local communities. Instead, there are concerns about local participation and the influence over national institutions and policy, about the criteria for site selection, or about the contribution of expertise in the local debate; these are equally relevant irrespective of whether surface storage or deep geological disposal, low or high-level waste, is the technical problem. Moreover, local communities often raise questions on these issues no matter which country they live in.

The value of the dialogue between communities is enriched as a result of the multinational dimension. There is keen interest in learning how others deal with crucial practical questions that are being faced in one's own region (for instance how to build local dialogue with citizens, how to interact with national authorities, implementers...) and conversely in informing others about one's own experience in nuclear issues. This sharing of experience highlights good practices, which can be adapted from one country to another or used to stimulate local empowerment. This experience sharing is first and foremost developed by and of benefit to the local involved people.

In a broader perspective, this experience is shared between local stakeholders, representatives of national authorities, implementers and experts. The emphasis on participation of local people in COWAM enabled members of this network to overcome distrust and to build a common reflection beyond usual stakeholder positions. The process was able to bring out sensible proposals based on local experience and aimed at improving the national decision-making process. Strikingly, working groups quickly agreed on the characterisation and framing of the most salient topics. The discussions in the Recommendation Groups were intense and made it possible to extract common lessons and views on ways to improve the decision-making process in general.

COWAM thus identified several complementary categories of issues where progress is needed if the governance of RWM is to be improved: the implementation of local democracy, the access of non-experts to expertise, the existence of a national framework for RWM and the capacity of local actors to influence it, the quality of DMPs and the sustainable regional development of communities hosting RWM facilities. Governance processes in most RWM contexts still need improvement. It is thus important to move from explorative COWAM conclusions to broadly based, validated and practical recommendations for their implementation. This is the objective of the COWAM 2 project (2004 - 2006) which is currently being carried out with support from and under the auspices of the Euratom 6th Framework Research Programme. While COWAM 1 worked as a network, COWAM 2 develops a new approach. Stakeholders are involved in a partnership with 19 expert organisations who contract with the European Commission. Both stakeholder and contracting experts contribute knowledge. This type of partnership enables the different actors to understand each other better, and to progress in the investigation of radioactive waste management issues together, while respecting their respective skills and interests.