

Stakeholder Participation and Voluntary Siting in Radioactive Waste Disposal in Belgium

NWMO SR-2008-29

July 2008

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Nuclear Waste Management Organization

The Nuclear Waste Management Organization (NWMO) was established in 2002 by Ontario Power Generation Inc., Hydro- Québec and New Brunswick Power Corporation in accordance with the *Nuclear Fuel Waste Act (NFWA)* to assume responsibility for the long-term management of Canada's used nuclear fuel.

NWMO's first mandate was to study options for the long-term management of used nuclear fuel. On June 14, 2007, the Government of Canada selected the NWMO's recommendation for Adaptive Phased Management (APM). The NWMO now has the mandate to implement the Government's decision.

Technically, Adaptive Phased Management (APM) has as its end-point the isolation and containment of used nuclear fuel in a deep repository constructed in a suitable rock formation. Collaboration, continuous learning and adaptability will underpin our implementation of the plan which will unfold over many decades, subject to extensive oversight and regulatory approvals.

NWMO Social Research

The objective of the social research program is to assist the NWMO, and interested citizens and organizations, in exploring and understanding the social issues and concerns associated with the implementation of Adaptive Phased Management. The program is also intended to support the adoption of appropriate processes and techniques to engage potentially affected citizens in decision-making.

The social research program is intended to be a support to NWMO's ongoing dialogue and collaboration activities, including work to engage potentially affected citizens in near term visioning of the implementation process going forward, long term visioning and the development of decision-making processes to be used into the future. The program includes work to learn from the experience of others through examination of case studies and conversation with those involved in similar processes both in Canada and abroad. NWMO's social research is expected to engage a wide variety of specialists and explore a variety of perspectives on key issues of concern. The nature and conduct of this work is expected to change over time, as best practices evolve and as interested citizens and organizations identify the issues of most interest and concern throughout the implementation of Adaptive Phased Management.

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STAKEHOLDER PARTICIPATION AND VOLUNTARY SITING IN RADIOACTIVE WASTE DISPOSAL IN BELGIUM

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This paper, commissioned by the NWMO-Canada, is one in a set of concept papers on international experience with community partnerships and voluntary siting in radioactive waste disposal. The purpose of these concept papers is to support public debate in Canada on capacity building in affected communities regarding this matter.

This paper describes the community partnership approach that was taken in Belgium for the siting of a repository facility for the disposal of low and intermediate-level, short-lived radioactive waste (LILW). It covers the period from the launch of the programme on voluntary siting until the decision on where to site the facility. Since that decision, the participatory programme has continued, with new challenges for both the waste management agency and the affected citizens. We will only briefly discuss some of those issues in the concluding paragraph of this paper.

To situate the Belgian experience, section 1 of this paper describes the context for the Belgian programme. Section 2 offers an overview of the voluntary siting programme focussing on its key features, the particularities of the decision-making process to determine a site, and the reasons why communities volunteered. In the last section, we address the issue of capacity building and what we think could be learned from the Belgian programme. To conclude, we will link these lessons learned to where the programme is today, and try to identify issues that could foster a Canadian debate on this matter.

1 Some context to the Belgian programme

Radioactive waste management (RWM) in Belgium is the responsibility of ONDRAF/NIRAS (the National Institute for the Management of Radioactive Waste and Enriched Fissile Materials), a semi-governmental agency, founded by Royal Decree in 1981. The agency's mission is established by law and royal decree, and includes responsibility for the transport, processing and conditioning, temporary storage, and final disposal of all radioactive waste on Belgian territory.

ONDRAF/NIRAS is furthermore also obliged to keep an inventory of all radioactive waste, potential radioactive waste (the nuclear liabilities), and spent nuclear fuel on Belgian territory.

The management of radioactive waste in Belgium is based on two technical programmes: one for low and intermediate-level, short-lived waste (category A waste) and one for high and intermediate-level, long-lived waste (category B and C waste).

1.1 The programme for low and intermediate-level, short-lived waste (LILW)

Until 1982 LILW was dumped in the sea. In 1983 an international moratorium put an end to these practises. So the search begun for a new land-based solution. After having made provisions for the short term management of the waste by building an interim storage facility at the site of Belgoprocess in Dessel (Flanders Region), ONDRAF/NIRAS decided to develop a final disposal method for the LILW. In 1991, the Federal Government [1] supported the agency in its preference for surface disposal.

In the beginning, the site selection method which was adopted focused on looking for the optimum site, based on a generic repository concept and relying heavily on physical site characteristics. After several failed attempts to site a repository, ONDRAF/NIRAS turned to a **semi-voluntary approach** to identify a **suitable site**, based on **site specific repository design** and **local participation in decision-making** through the **joint development of an integrated repository project**. This was backed by a Federal Government decision in January 1998, instructing the agency to look for a potential site for a LILW repository in the existing nuclear areas and in any municipality that would be willing to volunteer. ONDRAF/NIRAS thereupon launched a participatory programme in December of that year. It is this process that we will describe in more detail in this paper.

1.2 The programme for high and intermediate level, long-lived waste and spent nuclear fuel

In the beginning of the nuclear energy programme, reprocessing of spent nuclear fuel was favoured to direct storage. However, in 1993 a moratorium on reprocessing was installed. Meanwhile all spent fuel is kept in temporary storage near the nuclear power plants [2]. The vitrified high-level waste, the end-product of the reprocessing, is placed in a central interim storage facility at the site of Belgoprocess. At present, the management of long-lived high and intermediate-level waste is mainly focused on short-term management. Long-term management is still in research and development. For more than 25 years, researchers have been studying the potential to dispose the long-lived and high-level waste in an underground repository in Boom

clay [3], and constructed for this purpose an underground laboratory (HADES) at the site of SCK•CEN (the nuclear research centre) in Mol.

2 The Belgian participatory programme for the management of low and intermediate-level, short-lived waste

In December 1998, ONDRAF/NIRAS presented its participatory siting programme to the public and potentially interested host communities, with the aim of finding an acceptable location for a LILW repository. A location that would be acceptable for the waste manager, the regulatory authorities, and the repository's future neighbours.

Initially, five municipalities expressed an interest. Further negotiations led to the establishment of three local partnerships in four of those communities: STOLA (now STORA) in Dessel and MONA in the neighbouring community of Mol, in the Flanders region, and PaLoFF in Fleurus and Farciennes (two neighbouring municipalities in the Walloon region that jointly investigated a shared site). Eventually only two municipalities, Dessel and Mol, volunteered as a candidate host community. In what follows we will therefore mainly focus on their experience. In this section we will identify a number of key features of the partnership programme (2.1), and discuss the particularities of the decision-making process to determine a site (2.2). Furthermore we will present some of the reasons why the communities decided to volunteer (2.3).

2.1 Key features of the participatory programme

The new site selection approach was based on the following principles:

- semi-voluntary siting;
- local participation in decision-making through joint project development; and
- development of a site specific integrated repository project.

2.1.1 Semi-voluntary siting

The programme could not be considered fully voluntary, since the federal government explicitly asked ONDRAF/NIRAS to perform site investigations in existing nuclear communities, and if possible in other interested communities. ONDRAF/NIRAS, however, extended the principle of voluntarism to the nuclear communities, by making the willingness to engage and discuss the possibility of hosting a repository part of its preliminary technical and social feasibility study [4]. No nuclear community could therefore escape a rough preliminary feasibility study, but further

studies would only be conducted in locations where the municipal council agreed to engage in the programme.

The graph on the next page (graph 1), illustrates the sequence of events in this semi-voluntary siting strategy, from the initial decision to start a siting process, to the establishment of a local partnership in a community willing to discuss the possibility of hosting a repository.

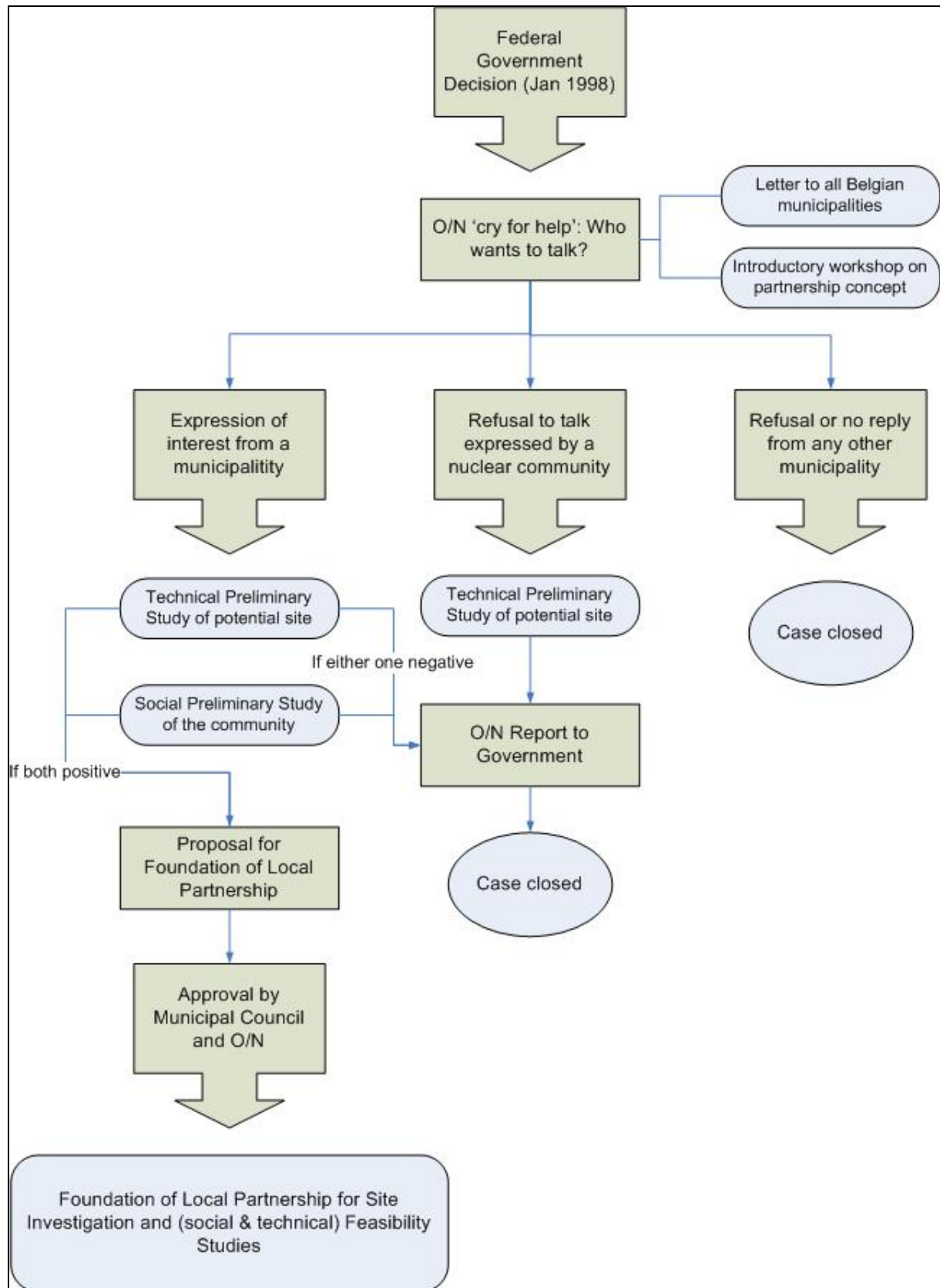
Engagement at this stage did not mean an immediate engagement to actually host the facility. The municipality thus had a de facto right to veto and the opportunity to stipulate its conditions for becoming a host community.

2.1.2 Local participation in the decision-making process

In those communities where a preliminary study was positive and an official political willingness to consider the issue was obtained, a local partnership was established between ONDRAF/NIRAS, the municipal authorities and a broad range of actors from civil society, representing local economic, socio-cultural life, as well as local environmental and other interest groups. The local partnership was tasked to develop a specific project proposal, acceptable to all partners (or at least to a majority) or to signal that hosting a LILW repository was not considered to be acceptable (whatever the reason). The project was subsequently brought before the municipal council for a formal political decision to put the municipality forward as a potential host community.

Local politicians and delegates from local environmental, social, cultural, socio-economic and other locally based organisations constituted the partnership and took a seat in its principle decision-making bodies. Individual citizens were also invited to take part in working group discussions, preparing the project proposal in detail. ONDRAF/NIRAS was the only non-local partner and adopted the role of the partnership's main designer or architect for the LILW repository. The local partners critically examined ONDRAF/NIRAS' propositions and entered into intense discussions with the RWM agency, occasionally commissioning additional studies or engaging their own experts to scrutinize the blueprints. In that respect, a partnership can be seen as the key platform of the site investigations and the repository design, dealing with all related issues such as safety, social, economic and ecological impact, urban planning, etc. This led to a form of co-ownership between ONDRAF/NIRAS and its local partners over the outcome of the process.

GRAPH 1: A SEMI-VOLUNTARY SITING STRATEGY



2.1.3 Development of a site specific integrated repository project

Having abandoned attempts to identify the optimum site, the challenge became to design a safe and suitable repository for a given location. Looking for social acceptance was premised in ONDRAF/NIRAS' new work programme on the idea that the desired repository should not only serve a national cause (solving the question of what to do with the LILW on the long-term), but also bring added value to the host community. This was translated in the notion of *'integrated repository project'*, a project consisting of both a repository and an accompanying local project of a socio-economic or other nature, both seen as interdependent and inseparable. It was up to the local partners in the partnerships to design this part of the project and to set the local conditions for acceptance of a repository facility. ONDRAF/NIRAS engaged itself vis à vis the participating local communities to uphold this principle and to never consider commencing the construction of a disposal facility without being capable of fully guaranteeing the realisation of the accompanying local project. This assurance to honour the integrated character of the project initially took the form of a gentlemen's agreement, and was made explicit by the Federal Government's decision of June 2006 to site the repository in Dessel. In this decision the government instructed ONDRAF/NIRAS to further develop the project proposed by Dessel, including the participatory process, also with the neighbouring municipality of Mol.

2.2 The decision-making process for siting a LILW repository

The first steps in the implementation of the decision-making process for siting a LILW repository were relatively simple. First, local partnerships were set up to initiate negotiations with the municipalities that expressed a willingness to consider the possibility of hosting a final repository. At the end of a period of research and negotiation within a partnership, a recommendation (in the form of a concrete project proposal) was made to the local authority, which would then decide to put forward the municipality as a candidate host community or to withdraw from the process. Following that decision, the Federal Government was to have the final say in where the repository would be sited.

The graph on the next page (graph 2) illustrates the various steps in the (political) decision-making process from the Federal decision to launch a participatory siting process, to the Federal decision to appoint a site.

At the outset of the programme, no one knew this approach would eventually lead to a community actually putting itself forward as a candidate host community, let alone that there would be two. No concrete trajectory was therefore developed for the process to continue after a location had been found. Questions such as "How much room for involvement would be left?"

What about candidate sites that were not chosen? For how long could the municipal veto last? When would a final decision be taken before the repository would be built? ...” were left open. Little attention was paid to how and according to which criteria a choice between a number of candidate sites would eventually be made. This meant that “What happens next?” became part of the negotiation on the repository project. The continuation of the participatory process was indeed a clear condition from both candidate sites. The partnership in Dessel also made a number of suggestions on what the local partners expected from the subsequent decision-making process. These issues were taken into account in ONDRAF/NIRAS’s final report to the government, which accompanied the two candidate sites’ project proposals. The report suggested that a rethinking of the participatory structures would be needed for the further development and eventual implementation of the chosen integrated repository project.

2.3 Why would a community consider hosting a LILW repository ?

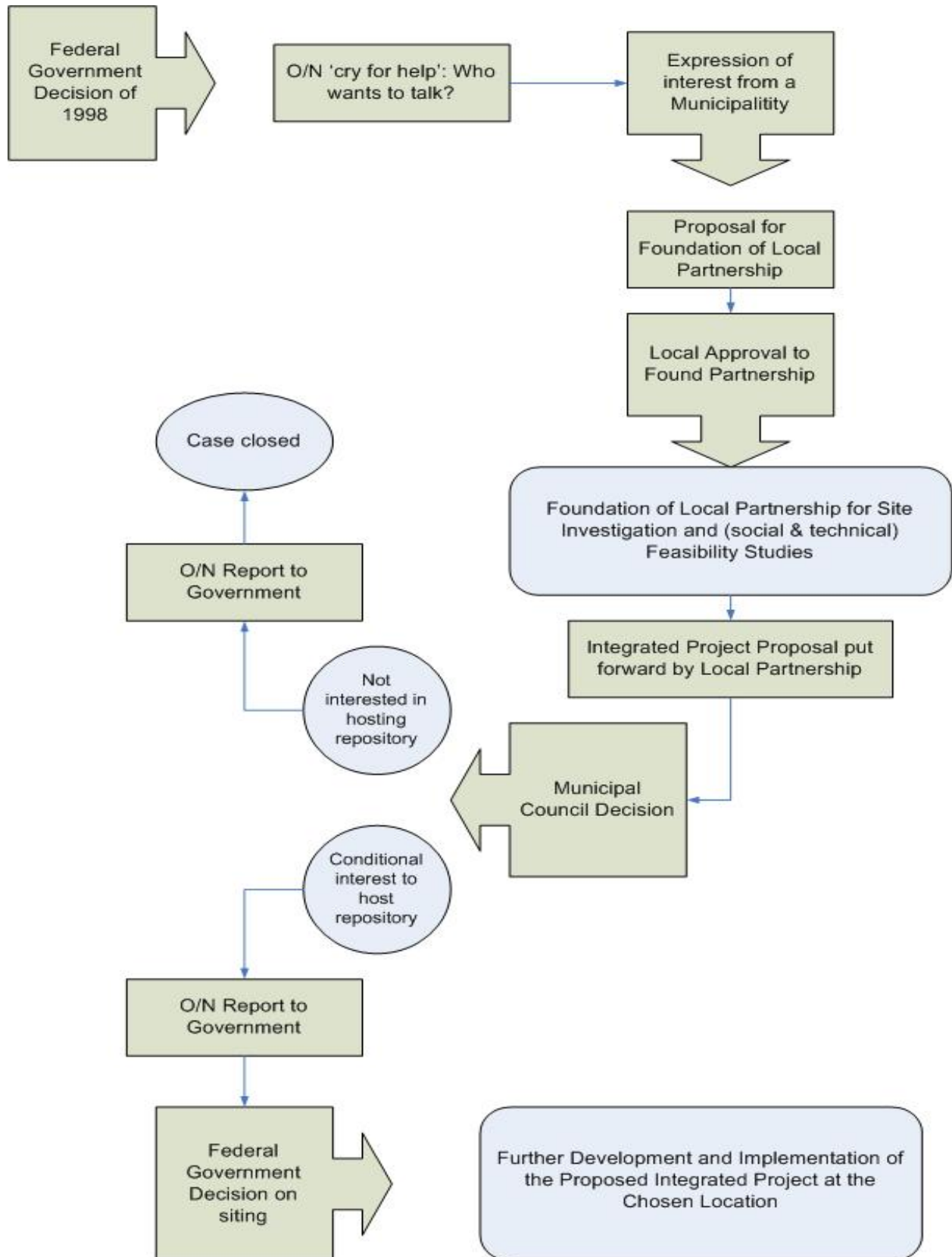
As we mentioned earlier, the government had explicitly required that the existing nuclear sites should be investigated for the technical feasibility of hosting a repository facility for LILW. However, not all communities hosting existing nuclear facilities were prepared to consider hosting an additional one. The municipalities of Dessel, Mol, Fleurus and Farciennes were; each for their own reasons.

The cases of Dessel and Mol

In both Mol and Dessel, the main reason to engage in the programme was the presence of the temporary storage facility at Belgoprocess, the nuclear companies in Dessel, and the nuclear research centre in Mol. This justification was given by virtually everybody interviewed during the preliminary social feasibility study conducted in 1999. However this nuclear presence was framed differently in Dessel than it was (and still appears to be) in Mol. This stems mainly from the historical development of the nuclear site across the border of these two municipalities, which served Dessel with most of the economic activity and Mol with the legacy waste.

Nearly all contacts in Dessel referred to the nuclear presence and most importantly the LILW in temporary storage as their most important link to the siting problem. Many expressed their fears to become stuck with the interim storage (seemingly not considered to be a safe long-term solution by most experts) if no other location would be found to host a final repository. With regard to the nuclear presence and the waste in particular, Dessel had learned to live with this nuclear activity over the last 5 decades, mostly on rather good neighbouring terms. The general point of view was this repository project was an opportunity to revive a declining nuclear sector.

GRAPH 2: CONSEQUENT STEPS IN THE SITING DECISION



In Mol the general attitude seemed more determined by its nuclear past, than by a nuclear presence. Today there is little nuclear activity on Mol territory, but at the turn of the century the municipality was still burdened with a good amount of nuclear liabilities from past research and industrial activity. Over the last decade, most of that waste has been conditioned and moved to the interim storage facility in Dessel. But at the time of the preliminary social feasibility study, many still considered the siting problem as an additional tool to expedite the decontamination of the legacy waste. However, in economic terms, the clean-up of the nuclear site in Mol has one major disadvantage: the loss of income for the municipality in the form of taxes on the nuclear liabilities. With the waste gone, so went the taxes. In addition, Mol is also burdened with a few brownfields, including an old asbestos company, the decontamination of which greatly surpasses the municipality's means and competences. Again people saw an opportunity to link this to the siting question. Many therefore perceived the repository project not as an additional ecological burden, but as an opportunity for regional development. Finally, the decision of neighbour Dessel to engage in the process and establish a partnership also proved an important incentive to the politicians in Mol to volunteer as well.

The cases of Fleurus and Farciennes

Contrary to Mol and Dessel, the inhabitants of Fleurus and Farciennes were hardly aware of the nuclear character of their community. The limited nuclear activity (a few small companies specialised in medical applications of nuclear technology) at the Fleurus-Farciennes site was not widely known. Unlike in Mol and Dessel, this nuclear activity has no fundamental impact on regional employment. A 'nuclear culture' was therefore absent in these municipalities.

The municipality of Farciennes is one of the most disadvantaged communities in the country, with extremely high unemployment rates and a very low average income. The reason why the people in this impoverished community were willing to engage in the process stemmed largely from a perceived opportunity for local development. But being a former mining area, there was doubt on whether the available nuclear site would be suitable to host a repository facility. So first, a follow-up committee of independent local technical experts was established to scrutinize ONDRAF/NIRAS' preliminary site investigations. Once the committee agreed these confirmed the feasibility of designing a repository adapted to the local environment, volunteers in Farciennes enthusiastically started identifying local development projects that would constitute their added value project. But Farciennes was not in a position to host the repository on its own, since part of the nuclear site (including the 'official letterbox') is situated in the neighbouring municipality of Fleurus.

The municipality of Fleurus however, is relatively well-off as compared to its neighbours. The local politicians therefore were not greatly interested in the nuclear issue and the siting problem as such, but the interest of Farciennes provided them with a reason to join its neighbour and try and benefit from the opportunity. Like their neighbours in Farciennes, the citizens of Fleurus were quite eager to join in the partnership, after technical feasibility had been established. The community had little experience with public participation, prior to this initiative, and many citizens saw in this an opportunity to contribute to the well-being of their community. The political representatives in Fleurus, however, were more reluctant to debate opportunities for local development. The ruling majority also feared strong opposition from the local green party to the repository project and therefore withdrew its candidacy to host the repository, even though the local partnership had advised in favour and developed a substantial added value project for both municipalities.

Given the position of Fleurus, the municipality of Farciennes had no other choice but to, reluctantly, withdraw from the process as well. Farciennes nevertheless decided to continue the local partnership without ONDRAF/NIRAS or Fleurus, and to use it as a vehicle to try and realise some of the proposed local development projects through other channels.

3 Some lessons learned from the Belgian programme in terms of capacity building

Honesty compels to admit that at the outset of this particular participatory programme, none of the parties involved fully realised the extent of the endeavour they embarked on. Every step in the process has proven to have its own particularities, difficulties, threats and opportunities. A process of this length (5 years from the establishment of the partnership to the completion of its report in Mol and Dessel) and intensity is demanding for all participants, particularly for the local citizens and interest groups, who participate on a voluntary basis because of a personal or community interest, and not because it is their job to do so. Citizens have to be allowed enough time and resources to fully participate in the debate and decision-making. Flexibility is also important in decision-making processes that span over a long period of time. But flexibility is a blade that cuts both ways: it means that processes and their outcomes to a large extent remain open for renegotiation, and that nothing is absolutely certain until a final decision is made. But what constitutes a final decision? Is this a decision in principle by the responsible government? Or a licensing by the regulatory authority? Particularly in a case like the LILW repository in Belgium, with the repository project consisting of different packages and with different

authorities having to rule over different parts of the project, a great deal of effort is needed from all involved to keep flexible and stay focussed at the same time.

In terms of capacity building, we will discuss the issues of availability of time and resources (3.1); the relative independence of the local partnerships (3.2); co-ownership and joint project development (3.3); and stepwise decision-making (3.4).

3.1 Availability of time and resources

At the outset of the Belgian programme, the idea was that the work of the partnerships would take about two years. This proved to be a serious underestimation of the time it really took for the lay participants to digest the subject, and for local partners and ONDRAF/NIRAS staff to get acquainted with each other and communicate in a meaningful way. It was indeed not just about getting local people up to speed on the latest scientific insights on radionuclides and safety standards. It was also about building trust and confidence by listening to the local people and their concerns, about being prepared to reinvestigate options, or look at certain aspects in far more detail than the experts originally planned. And all of this took time. In both Mol and Dessel, the local partnership took about 5 years before it presented a proposal to the municipal council. But a process does not only get delayed in time for ‘positive’ reasons. Where it takes time to build a dialogue, to establish trust and confidence, it does not take long for a breach of confidence to destroy much of what had been build, and to loose valuable people in the process. In case this happens, it is likely to take a very long time to restore the dialogue and rebuild a fragile process. This can be illustrated by the following example: ONDRAF/NIRAS had always taken the position it would not make a final choice between the remaining candidate sites, as each proposal had been given the ONDRAF/NIRAS stamp of approval in its final report to the government. The Federal Government, however, demanded the agency state a preference. This was done in a confidential note from the director-general to the competent Minister, advising to chose Dessel over Mol, without consulting the local partners. Many in Mol felt betrayed by their partner and responded very negatively, not so much because of the decision to site the repository in Dessel, but because of the way in which the decision was made. Being a neighbouring municipality to Dessel, with the future site close to the border, Mol could not be disregarded. It took more than a year, for a new collaboration agreement between both municipalities, partnerships and ONDRAF/NIRAS was signed in November 2007. In the mean time, ONDRAF/NIRAS did mainly preparatory work (such as setting up a project team in Dessel, launching calls for detailed studies on project components, etc.) and kept the partnerships

informed, but only in the fall of 2007 did the interaction re-intensify to a level comparable to the in depth collaboration with the partnerships and their working groups in the previous phase.

In terms of material resources ONDRAF/NIRAS provided the partnerships with a fixed annual budget (of approximately 250.000 EUR [5]) to cover general expenses such as the salaries of the project coordinators, all communication-activity and all ‘operational costs’ (stationary, telephone bills, mailing, electricity, ...), as well as logistical support for the working groups. This ‘logistical support’ should be interpreted in the broadest possible way, allowing them to invite the experts of their choice, to order additional studies [6] they thought necessary and to pay for site visits or other relevant trips or conferences. Both after the municipal decision to become a candidate host community and after the government decision on the site, the tasks of the partnerships were revised, as were the budgets provided.

3.2 Relative independence of a local partnership

Until the partnerships handed over their final project proposals to the municipal council, they were the only body where decisions concerning the potential repository were taken. With ONDRAF/NIRAS having only one vote in the decision-making structure of the partnerships (albeit with a veto on technical feasibility), it was in fact the local community that decided on both social and technical feasibility. Being constituted of representatives from various local actors and interest groups, the partnerships were (and still are) on the one hand dependent on their input, but on the other hand independent from these various particular interests. The relationship between the partnerships and ONDRAF/NIRAS, and between the partnerships and the municipal authority, remains a special relationship, which could not be considered fully independent, even though in interviews the majority of the partnership members do consider their organisation to be totally independent.

What the local participants found most troublesome, was their de facto dependency on ONDRAF/NIRAS for information. Given that Belgium is a small country, and Dutch a language not widely spoken in the world, it was not easy to find relevant expertise outside the nuclear sector, even if one had the resources to engage them. STOLA tried to overcome this problem by engaging a university professor in hydro-geology to challenge the ONDRAF/NIRAS experts and to discuss hypothesis and parameters that needed to be studied; while MONA engaged a consultant in civil engineering to scrutinize the repository blue prints.

One of the main achievements of the partnerships was their ability to protect the local interests and to oppose ONDRAF/NIRAS publicly if they suspected the agency to act against the collective interest of its local partners.

It seems equally fair to say that no partnership could be founded without the consent of the local authorities. On top of that, local political actors formed an important constituting group of the partnership. Their representation in a partnership reflects their representation in the municipal council and therefore changes as a result of local elections. Several smaller to somewhat larger incidents in the life span of the partnerships show that the partition between local authority and partnership remains fragile. But both remaining partnerships thus far have managed to overcome any incidental political storms. Moreover, they both were successful in remaining operational and faithful to their positions over a period spanning two local elections (one in 2000 and one in 2006), and the subsequent changes in the political majorities in both municipalities.

3.3 Co-design and co-ownership

Working together on a project and pursuing a common cause, resulted in internal dynamics within the partnerships that strengthened their role as defender of the common local interest. The repository project was no longer something that an outsider wanted to bring into the community; it became the local people's project. Through dialogue, all interested parties were invited to express their interests, concerns, fears and values, to listen to the views of other parties and to come to terms on what this particular group of citizens, in this particular community, at this particular point in time defines as a common goal. Experts from ONDRAF/NIRAS were given a forum to explain what, in their view, a LILW repository should look like and why they considered that to be a safe and healthy solution, given the characteristics of the site in question. The local participants then questioned the ONDRAF/NIRAS experts directly and/or invited other experts, whose opinion they considered relevant. By entering into dialogue with the local community, the concept-designers on the one hand had the opportunity to better explain their project to the local stakeholders. Questions and reactions from the public, on the other hand, obliged them to be more creative and to rethink certain aspects of their initial concept or project.

Although the critical reflection in the partnerships did not lead to a rejection of the basic proposals by ONDRAF/NIRAS, it did provoke a number of changes to the project. The following is just one particular example of such changes: In Mol and Dessel local people were very concerned about the high groundwater-level affecting a surface repository. Each partnership subsequently put forward its own suggestions to solve this problem. In STOLA it was suggested (and accepted) to change the proposed elevation (to safeguard the installation from groundwater seeping through) by a cave or basement that could serve as a monitoring area and 'drip-tray'.

3.4 Stepwise decision-making

As we saw before, a voluntary engagement in a partnership did not automatically imply a formal candidacy to host a repository. Both during the social preliminary studies and the working of the partnerships, it became clear that this had a positive impact on the willingness of various local actors to engage in the process and to actively collaborate in the design of an integrated repository project. Limiting the task of the partnership to the phase of policy preparation, seems to have made it possible for a number of actors (particularly local politicians and local anti-nuclear activists and environmentalist groups) to actively contribute to the development of possible solutions for the LILW. While the partnerships developed concrete proposals, this did not mean the final decision to place the repository in that community was irrevocably taken.

In addition a formal candidacy from a municipality remained conditioned on the acceptance by the federal government and the waste producers of the proposal put forward by the partnership. One of these conditions was the continuation of the participation. Strengthened by their experience, the local communities demanded to stay involved until the very end, to make sure their conditions were effectively met. In the mean time, the partnerships in Dessel (the chosen site) and Mol (neighbour to the host community) have restructured and given themselves the new task to follow up the development of the blue prints for the integrated repository project and to make sure no changes are made that they do not agree with.

4 Conclusion

The Belgian experience has shown that local stakeholder engagement in a preparatory stage of decision-making on siting can generate sufficient local acceptance. However, it also shows that this only works if enough room is created for local input and efforts are made to turn a negatively perceived activity into an added value project for the host community.

By setting up local entities (the partnerships) as key platforms for negotiations and for the development of an integrated project proposal, potential host communities were given the opportunity to make the repository project their own. In the interest of the well-being of their community, local citizens scrutinized the waste manager's plans for the repository facility and set a number of explicit conditions for accepting to host such a facility. In two municipalities, the local authorities judged the work of their partnership sufficiently legitimate to support its proposed project and to put forward the municipality as a candidate host community. In neither

community did this lead to any form of public outcry, which suggests that the partnerships were an effective representation of their community.

The Belgian partnerships have considered it vital to stay active and change their role from key platform for the development of the project proposal, to guardian of their proposed project.

The challenge today is to further develop and implement the project as an integrated project that is co-owned by the waste management agency and the host community. It is critical that affected communities have adequate time and recourse available to engage in a meaningful way in the process. In order for the local partnerships to keep playing their role of watchdog and stay as representative of their community as possible, they will have to develop ways of remaining flexible and adaptive to social change. And this not only in terms of their composition and organisation, but also with respect to their own role and relationship vis-à-vis other actors, some of whom may only begin to emerge now the project is becoming more concrete and preparations for implementation are being made.

¹ Belgium has a federal state structure, uniting three regions (the Flemish, the Walloon and the Brussels-capital Region) and three communities (the Flemish, the French and the German-speaking Community). The federal state, regions, and communities are on equal footing from a legal point of view, but have different competences and responsibilities. The communities have competences regarding language, culture, education and social welfare. The competences of the regions are territorial, and include issues such as environment, agriculture, housing, town and country planning, etc. The federal level governs all that is not explicitly attributed to the regions or communities (e.g. foreign affairs, the judicial system, social security, etc.). **Everything related to the nuclear sector (nuclear energy production, radiation protection, R&D, waste management, etc.) is a Federal Government competence.** However, when we talk about the siting or daily operating of this kind of activity, regulations on regional (e.g. environment) and community (e.g. employment) level also need to be taken into account.

² ONDRAF/NIRAS is legally not responsible for this spent fuel, as long as the electricity company does not declare it “waste” and hands it over to the RWM agency.

³ First, the research focused on disposal of vitrified waste, but since the 1990’s it looks into direct disposal of spent fuel, as reprocessing became politically unfashionable and chances grew that direct disposal at some point would become a necessity.

⁴ The technical preliminary feasibility study was performed by ONDRAF/NIRAS and served to make sure that a suitable site could be found. The preliminary social study and ‘mapping’ of the municipality (and its neighbours) was performed by a third party (the University of Antwerp for Mol and Dessel, and the University of Liège for Fleurus and Farciennes) and sought to establish potential for acceptance (or at least sufficient common ground to start negotiations), and interest for setting up a partnership; and to identify potential partners and a suitable partnership configuration.

⁵ Although both Flemish partnerships eventually lasted for nearly 5 years, ONDRAF/NIRAS only contributed three times the annual budget, as after three years there still was enough money available.

⁶ All necessary research with regard to the technical and safety aspects of the repository facility remained ONDRAF/NIRAS’ responsibility. Furthermore it was agreed that the partnerships could require additional research in certain areas or ask for a second opinion. Such expenses, as a rule, also fell under the responsibility of ONDRAF/NIRAS.