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## SITEX-II

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### Workshop with Civil Society

### Minutes

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Brussels, 15-16 November 2016*

## 1 INTRODUCTION

The SITEX-II project is developing an experimental way of conducting research by developing interactions between representatives of experts and Civil Society (CS) in the perspective of the Aarhus Convention. In the frame of the project, Civil Society will have notably the possibilities:

- Formulating specific technical and socio-technical R&D issues and concerns that civil society expects to be included in the RWM R&D programmes of TSOs;
- Determining the conditions and means for establishing fair and equitable interactions with technical experts from different countries along the process of safety case review of GD, that involves a long term intergenerational perspective (in the perspective of Aarhus Convention).

As part of the Task 5.1 three successive workshops with a “group of third parties”, experts and other civil society organisations are foreseen to support the development of the results in WP 4. The first workshop was organised in Ljubljana, Slovenia from 22-23 of February 2016, the second workshop was organized in Budapest, Hungary from 28-29 June 2016, and the third workshop (this workshop) was organised from 15-16 November 2016 in Brussels, Belgium. The aims of these workshops are to collect the expectations of CS from the Expertise function and their recommendations for the future SITEX network, on the basis of the works produced by WP1 to 4 of SITEX-II. The addressed topics typically relate to safety case, R&D and intergenerational governance.

The third workshop with civil society and other organisations was dedicated to several topics discussed in different Work Packages of SITEX II project:

- Civil Society interaction in the continued development of a research agenda in the proposed SITEX network: presentation of the current status, proposals from civil society organisation and further work in this area (WP1);
- Possible Civil Society interaction and influence in future European RWM research including Joint Programming: the current development and preparation of new EU JP, the mode of organisation with the consequences to the SITEX II network (WP1);
- Core message, summary and recommendations with regard to the results of the previous workshops/discussions/interviews on safety culture and conditions and means for public involvement along the safety case review process (WP2);
- Presentation of PEP results and discussion (WP4);
- Presentation of the questionnaire related to the Intergenerational governance, with moderated group discussion and presentation of the results from the groups (WP4);

The agenda of the workshop is attached in appendix 1 together with list of participants in appendix 2. The number of participants different depending on the day, the maximum number was 31 participants from variety organisations (NGOs, Civil Society organisation, project partners, others).

According to the agenda a brief description of the results from involvement of civil society representatives in the development of strategic research agenda were presented by Johan Swahn (MKG). In continuation also the results connected with development within the new European Joint Programming on Radioactive waste management were given by Gilles Heriard-Dubreuil (Mutadis) focusing on the possible proposed topics. Additionally, the opportunities on how the civil society could

be included were discussed with the SITEX II representative in the core group for preparation of EU JP on RWM.

Another presentation and discussion facilitated again by Gilles Heriard-Dubreuil was devoted to the Pathway Evaluation Process (PEP) exercise which has been conceptualized as an exercise of participative and comparative assessment of alternative scenarios on long-term management of radioactive waste. It is based on two main concepts:

- The concept of “Pathways” defined as strategies retracing the steps of a possible evolution from the current situation of RWM as a whole to a final state (Safe Terminus),
- The concept of “Safe Terminus” (ST) defined as a situation where the safety of all considered categories of waste do not anymore entail an active human contribution, after a period that does not exceed an order of several generations. To seek a ST does not mean having a predetermined solution in mind from the start.

The results from the organised exercise during the Workshop in Budapest draw some generic conclusions:

- PEP is not a tool to choose between approaches. All can be good or bad. The main aim is to allow a pluralistic discussion on the way to secure safety of humans and the natural environment through different options.
- It is why there is three different boards in order to try out different scenarios and test different criteria. It allows discussing a broad range of issues and envisioning situations and solutions participants may not have thought of.
- PEP discussions emphasize the importance of transversal elements (to have in mind in all the pathway), notably institutional structure and background, meaningful public participation, pluralistic expertise, availability of financial resources, monitoring and memory in long-term horizons.
- PEP allows discussing how social issues impact technical ones. RWM is considered here as a socio-technical issue, not only a technical one.

Based on presented main results it was decided to implement the PEP tool in the national context in Czech Republic discussion in the case of geological repository.

## 2 PRESENTATION AND DISCUSSION ON SAFETY CULTURE

In continuation Maryna Surkova (FANC) presented the main results and conclusions drawn based on the results of the performed interviews and the feedback during the workshop last two workshops on civil society contribution to safety culture and safety case review. The objective was to identify the conditions and means for engaging Civil Society (CS) with the Expertise function along the safety case review process.

Tasks were focused on the investigation how safety culture can be shared through the different stakeholders and to identify the appropriate processes and tools in order to enable experts' interaction with CS along the safety case review activities in the perspective of the Aarhus Convention. Based on the obtained results the aim was to produce a set of recommendations for the future steps. As a tool a separate questionnaire was developed to find commonalities and differences on vision on safety and more specifically safety culture, the CS expectations related to their interactions within the decision aiding/making process along the safety case review and conditions and means for public participation along the decision- making process.

The results obtained indicated that a lot of commonalities (e.g. about basic safety objective &

safety principles) in the understanding/perception were found however the ‘vocabulary’ can be different. Some issues still should be clarified for example what is included in the passive safety as part of the institutional control, who is responsible and how should be implemented. Trust is a main key-issue of the safety culture and shared societal safety culture builds trust. Shared safety culture can become a tool to minimise the complexity of the system via gaining overall trust.

For efficient decision aiding/making process there are some conditions and means for public participation, like:

- Civil society takes part in the decision-making process right from the start or actually should be part of the justification of practice already,
- The aim should be to integrate the general public into the process as legitimate partners,
- The type of participation can vary depending on the stage of the decision-making process,
- Deliberative nature of the process itself, with discussions between participants at interactive events, designed to give sufficient time and space to enable participants to gain new information and to discuss in depth the implications of their new knowledge in terms of existing attitudes, values and experience,
- There is time to consider and discuss an issue in depth before coming to a considered view,
- No pushing in a particular direction,
- Condition for participation should be fulfilled (information, participation in decision making, access to justice, expertise and resources).

The presented findings and recommendations were well supported but the participants, however they also underline how difficult it is to be fulfilled in the national contexts. They pointed out many examples where the opposite from presented takes place and that the trust has been not established or has been broken. Under such conditions is very difficult to build it again.

### 3 PRESENTATION AND DISCUSSION ON INTERGENERATIONAL GOVERNANCE

The objective of the moderated discussion on intergenerational governance was to reflect on and challenge the provisions and requirements related to intergenerational aspects of radioactive waste (RW) and spent nuclear fuel (SF) management, as set out in different international treaties/conventions and other EU binding legislation. The following documents were reviewed and serve as inputs for the moderated discussion:

- COUNCIL DIRECTIVE 2011/70/EURATOM of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (Waste Directive);
- Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management, 1997, IAEA;
- Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention), 1998;
- Convention on environmental impact assessment in a transboundary context (ESPOO Convention), 1991 and
- The NTW BEPPER report on “Transparency in Radioactive Waste Management”, 2016.

Based on the review of provisions and requirements the sets A to D of questions were defined and presented by Nadja Zeleznik (REC). The participants were then grouped in 3 groups and moderated discussion took place addressing the following:

- A. Member States should ensure that adequate funding is available for the management of spent fuel and radioactive waste, the costs of the management of spent fuel and radioactive waste shall be borne by those who generated those materials.
- Questions:
    - How to assure (technically, financially, politically...) adequate funding by generators of RW and SF under unpredictable conditions (bankruptcy of the responsible generator, ....)?
    - Who (regulators, Technical Support Organisations (TSOs), Civil Society (CS) representatives...) should be involved in the decisions related to the present-day estimation of necessary funds?
    - How far in the future should such funding be available? How should funds and institutions be managed such that the future value of funds intended to be paid out over the long term is not greatly discounted?
- B. With respect to the Transparency Article 10 in the EU Waste Directive it is required that Member States, in keeping with their national legislation and with international obligations, ensure a) necessary opportunities for the public to participate effectively in the decision- making process and b) provisions for information (to the extent that this does not jeopardise other nationally or internationally designated interests such as, inter alia, security).
- Questions:
    - How to organise decision making in the process of geological disposal establishment (for example in medium term periods of 20 to 40 years) taking into account public participation?
    - In your opinion which types of public participation opportunities should be ensured in priority? What is your justification: because they are most efficient, most fair, most feasible under current law, or for other reasons?
    - Some decisions taken in this period are not reversible: does it mean that the future generations are represented by current generations? Can this eventuality be properly taken into account by the decision-making process?
    - How could the participation in long term after closure of repositories be transformed into stable long-term forms to assure intergenerational representatives.
    - Is there any other possibility to take on board future generation in decision-making (also having in mind that the reversibility and retrievability in some management programs are developed only to obtain public acceptability)?
    - Which information could in fact jeopardize security, confidentiality, etc.? Should these limitations be reviewed today? Which concerns are

justified, which appear unjustified from the point of view of public participation now and in the long term?

C. The content of national programmes is prescribed in Waste Directive, foreseeing many obligatory chapters in which the whole RW and SF management approach should be explained with significant milestones and clear timeframes for the achievement of those milestones, concepts or plans, technical solutions for spent fuel and radioactive waste management from generation to disposal and post-closure issues including knowledge preservation. Among others there is also the responsibility for the implementation of the national programme and identification of the key performance indicators to monitor progress towards implementation.

○ Questions:

- How to organise participation of Civil Society in the evaluation of the national programs, especially in view of monitoring key performance indicators and actual implementation of the programs?
- Is the implementation review process as foreseen in the Waste Directive (and carried out in parallel with Joint Convention process) sufficient and effective?
- Which other possibilities may exist or should be created to participate in the review and monitoring of national programs, their content and implementation?

D. General considerations on the governance aspects stemming from the Aarhus and Espoo conventions:

○ Questions:

- How to assure the necessary technical competences of participants in the RW and SF management:
  - Example of Swedish approach with a dedicated CSO dealing with the topic continuously and obtaining the funding for the activities,
  - Relying on the TSOs and Regulatory Authorities to represent the CS,
  - Establishing a European CSO organisation (e.g. NTW) specialised in the independent evaluation of RW and SF management and obtaining direct resources from the European Commission (EC).

The results of discussion were reported by moderators. Major streams of the discussion are as reported divided in the three groups. The levels of details are different, but the results are very interesting.

**Group 1:**

P1: In general we are talking about setting an intergeneration engagement and how we can organise that several generations in a continued way can maintain scrutiny along the process of implementing a safe terminus option. There are several background legal documents that are available, that have been

presented and that you all know. And what we are looking for now is more practical ideas about the way to implement this. I can see as in introduction that a few years ago it was something like: as soon as the declaration/ the authorisation is given by the authority it would be a linear process where everybody was thinking more or less the game is over- but it is not the case. That is why I wanted colleagues from regulatory authority to give you a presentation to share together what is the duty of the regulatory authority. And there is some 'average' to reconsider or to argue about the potential options and so we have to find this 'average' and to better identify together what the crucial points are. I mean: be on the continuity of operation even the regulator has to find some milestones where he will consider re-examination of the things and we have to know what these re-examined things are because we, civil society, cannot think just like this, our scrutiny usually takes place at very important check points. And we have to find these check-points, we have to be ready in the sense that the coming generation have to be aware of what is coming at that time. My personal impression is in fact the operation process will be an experimentation process. Usually it is foreseen as a kind of just implementing what has been planned but it is not the case. There are lot of things that are not yet decided, there are lots of options that might change so lots of issues! Not to speak of the general social context: socio-, historic-, geological, political context where things may also change and what we have heard from regulators was very clear this morning, that this also can be at the origin of the major consideration maybe it is just the heat that makes the ice cap vanishing and that changed the conditions for bears and also for disposal.

The first discussion is about the funding. Member states should ensure the adequate funding is available for management of spent fuel and radioactive waste management. The cost of the management of spent fuel shall be taken care of by those who generated those materials. The second block is about the implementation of transparency in principle by the Waste Directive Article 10. The third block is regarding the way we can manage the scrutiny of the follow up of the national programme. Because now in a Waste Directive it is compulsory for the state to produce the National Programme, firstly presented in 2015, that would be updated every three years. So, in 1.5 years there will be a second version. And we are now training the question of how to make it possible for society to intervene, to give you an example, in Hungary, we discussed this problem with our colleague from Energia Club, she finally made it possible to have access of the National Plan, it was not easy, she had to struggle, and then there was a window of the opportunity at the end of July- beginning of August, when everybody was away to bring some comments. They did it and then they looked at the conclusions and they have seen that there are little if no changes as a result of their remarks. So this is the minimal format for transparency. Let us consider how we see, how we can implement more substantial process of transparency and exchanges of the Directive of the Aarhus Convention. And the last block is regarding the governance. We will start with the question of funding.

P2: I have a question which specifically refers to the Brexit position of the UK, which refers to the article 24 Waste Directive which set the context for this discussion. The situation is at the moment is that UK is managing spent fuel from other European union states at both Dounreay and Sellafield. UK imported the material, post 1973 when UK joined European Union. It will be there still at management charge after we leave in two- years' time? And I would like to know how does this Directive cover the circumstances where the member states signs up under Directive and then is no longer bounded by the Directive but still has the management responsibility because there is quite a lot of spent fuel in the UK. I don't think any of our policy makers have thought about the details but they are going to have to address it.

P1: It is difficult for me to answer but I guess that if it is like France, there are contracts between countries, not at EU level so if there is a reprocessing of material, the result will come back to the



original country. I guess you should have a look at the contracts which should be public. Have you asked to have an access to them?

P2: We have tried for about 25 years.

P1: What I know is that there was a recent shipping from France to Japan with a large quantity of uranium that was sent back to Japan. That is not exactly how it is linked to our question. How is it linked?

P3: In principle, there are a few documents that build a strategy for the radioactive waste management and they say that there are two questions: safety and ethical sides that are the roots of the radioactive waste management and like today it was said by definition by safety principle of justification the funds should be there and there are two principles that are usually applied in the current system for radioactive waste management. It's users pays or polluters pays principle and intergenerational equity so which means that on one hand you have the ethical pillar (users/polluter pays) so this is the requirement for the polluters to build up financial means and then you have the intergenerational equity which says that every generation that benefits from nuclear power should honour its responsibilities and should deal with RAW in a manner that protects human and environment. And there is also a legal basis. There should be three characteristics applied: sufficiency for your funds (contributions should be in line with the total fund collection period), availability of the funds (period review should be vital) and again this fund should be used only for RAW.

P1: I have to take a point of colleague who says where are the provisions for the waste that is in my country which belong to other countries. He wants to check it legitimately and have no access to those contracts. So obviously, we have a problem there: because on one hand we have a Directive and on the other hand we have a reality.

P2: It is not just a Directive. The Directive cannot be applied in 2 years' time. The justification requirement will not be applied. I know our government intends to deregulate the stuff. We will be completely in the situation like in the Amerika- the Trump one- it's about to close the Environment protection agency. We are going to do something similar towards the Directives from Europe. It is going to be a war on formal European Directives in the UK and this is a kind of thing that other countries in the European Union need to recognize – because it is their nuclear waste in the United Kingdom. It's going to stay there for a very long time. So, this is not just a theoretical point I am making. This is a real situation that it is going to arise –and it will arise in 2 years' time.

P1: Vis-a vis the UK context the UK is becoming a neighbouring country.

P2: It used to be a country where the laws have been applied and the European countries assumed that the laws are applied and they have changed all the rules of the game.

P1: So the major threats vis-à-vis the conditions are coming from the political people what is more or less what you are saying. So difficult to deal with that.

P2: And on the specifics on the finance - at the moment UK government has got a fantasy programme for the Waste generators to fund it. It is a complete nonsense because they do not have to pay insurance, there is a cap on the costing which is going to come from the future tax payers (the huge majority is going to come from the tax payers and a tiny one from the waste producers) and they misrepresented completely to the public what is going to be paid by the waste generators.

P1: ... so they are in a way mortgaging future generation with this?

P2: In a totally dishonest way. As usual in the UK.

P4: I think there are two things to look at. If you are in advance of a decision and you have a nuclear power then the funding is to become when you start nuclear production in order to finance up to the end but you don't yet know what concept you are going to choose and you don't know how much it is going to cost. It is difficult to evaluate what funding you are going to need if you don't know what you are going to make in operation. So I think there is a longer time you have a time where you have to make provisions because you have to make provisions because you choose something and there is an end to it but along the way it must be when the concept is designed when it is more the designer how much it is going to cost. We had exactly the same problem in France this summer: Andra said the concept as we have it is going to cost XXX... and the producers are the ones who should pay, but they say oh, no, it is much less etc.; and one of the politicians said let's to cut a pear in half and it is going to cost 'that'. Then what do you do? Are you going to fund for that? Who has the say in knowing how much it is going to cost? There is another cost that nobody thought about is the cost of evaluation.

P2: The regulator could say to the government – we're not going to give a license to that facility. We judge the financial provisions are insufficient.

P4: That is the only way it is actually works. I don't care what the price is. You give me a concept and I tell you whether it is safe. If it is not OK- give me another copy of it. And it is not licensed. But that doesn't answer the question here: how are you going to fund.

P5: It has to be periodically updated. How it is done in Scandinavian countries where they have a quite good approach. For example, in Czech Republic it was established with the regulatory authority in 1997. And since that time the fees paid by generators – it is still the same. The fee didn't increase for the past 20 years however the price for electricity for the inhabitants increased. EC requested this periodical update to support our position. The costs for nuclear construction and operation of the repository normally increased but the fees stay the same.

P4: So that is why the civil society has a say into it. If you have to increase the price for electricity, the civil society is going to pay.

P5: I agree with you but our regulators should have pressed government to solve the situation.

P6: I think the regulators has a say on the amount of provisions.

P7: I can propose the idea of waste generators to pay in advance. The total sum which will be approximated at the certain time would be paid just in advance –not in a proportion to the energy generated. That could be a bit unreal for them but it will be more real for the society.

P6: I think it is a waste owner who defines the provisions and I have an impression that the regulator has a little influence on the amount of provisions. There is also a conflict of interest I think. The waste management organization has a high interest in provisions... And the waste producer has an interest in low provision not to increase the price for electricity. So a view of the regulatory body can be interesting. I think in many countries we are in the situation where the provisions are not sufficient.

P8: In Finland, we have a separate waste fund and it is based on the amount of the waste produced. It is a public information how much money exists in this fund. It is defined by law that this fund is checked every year and the amount of money is recalculated with regard to the waste produced plus

the estimation of the Onkalo costs. And I think the money in this fund are in relation to this fund. What is lacking there is that when you calculate the amount of uranium waste produced, when you start the nuclear power station and if you need to reconstruct it – so a kind of uncertainty evaluation.

P2: As far as I know there is no coverage for the radioactive waste management in the circumstances involving release of radiation. We know that after Chernobyl and Fukushima, the costs of the clean-up of the radioactive waste were astronomical. So we should make that point that in nuclear industry it is not required to cover these circumstances.

P4: Just the respond about the economic aspects. It's a projection of the amount of provisions after a certain amount of years. They take some hypothesis on what will be the provisions in twenty years, for example. So they have to take into account some actualization ways. If there is not enough financials at the moment, the construction of the repository will be delayed and the provisions will be higher.

P1: I am troubled by this. If you have an amount of money that today you can invest and if you have fifty years the amount will be much higher. But it is not the evaluation ... And I want to raise the question: where is the money? Is the money on the account of the mentor? In many countries it is just in the accounting of the waste producers. The questions are: where is the money? What is the scrutiny of how it is managed? Who has the money?

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P1: Let's move to another point. Now we have a question of implementing transparency. It was touched slightly only. I would like to group the questions B and C in order to fasten the discussion. So, we have the article 10, we have the idea that it should be possible for the public to participate effectively. Among the issues that are under scrutiny the national programme now that have to be issued by each state as a result and opportunity for civil society to review.

P5: Everything depends on the stage of repository development, if you take an example of Czech Republic it is really an issue because you can't go back and you are not free in your decision because you are involved from government point- ...it is not easy. The request for transparency given by Waste Directive- it's a good point for the civil society involvement. Because now the implementer has to listen more carefully to the public opinion and has to manage its 'siting' by consulting its decisions with the public.

P1: As you say Czech Republic is in the middle right now: it has eliminated some options and has a fixed concept whereas didn't not start implementing. Am I right?

P5: Not exactly. It has a concept. If there is a request from EC to involve civil society – it is an issue for an implementer: how to manage it because for example if I look at our legislation the public involvement is requested by law. And concerning the regulator for example our regulator doesn't have a strong request to involve public because for them it is far away. Because the regulator is a state institution. And they need money for this. And it is not based on the legislation request. They don't have money for, for example, establishing a group communication with the citizens.

P1: Am I right to say that your legislation needs to translate the Directive?

P5: ... just now it is a duty of the implementer to communicate with civil society.

P9: Do you have a principle decision the way you do it? Like Environmental Impact Assessment?

P5: Strategic Impact Assessment. It is requested because we have a new Atomic law since this year and a lot of governmental decisions have to be changed and it is a huge amount of work to put all these requests in construction. For example, in case of low and intermediate radioactive waste, it is not that complicated but in case of geological disposal because of our deadlines is to have 2065 as start of operation of the geological disposal. Is there a link between SITEX activities and OECD record keeping? Because there was a project related to the 'over generations' management.

P1: The documents from the last meetings are not yet released though we will consider the results as soon as they are made available.

P5: ... it is a quite long term activity right now. I had a talk with people involved in the informational data bases and they promised to write some reports by the end of this year.

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P4: We should not forget that this is a big challenge also for the TSO's, regulators and implementers as well to manage such a project in a such time scale.

P1: I wanted regulators to introduce their vision on this long term project and how a regulator sees the long term process. There are lots of issues to be discussed all along the process and there are also leverage to intervene and to argue there and we understand that also there is a kind of specificity according to the country and the stage of the project. And we understand also that those are principles – but when the law has passed when the decision has been taken and it is becoming difficult to reconsider for justification and optimization principles – it is not that easy so we need to show that it is very important civil society to be involved with a goal to advocate and backup the regulators and TSO's should they consider that some aspects have not been properly taken into account. I wonder if we should not in the future have a better second look to what the duty of the regulator is in order to be well aware of what type of arguments could be introduced and at what stage. We cannot just imagine like this or foresee that there will be people in new generations. What makes it that they will be there? And they will have some interest on the issue. And that is why this morning I tend to see the PEP exercise as a way to give an opportunity to the newcomers to appropriate the whole story. Because if it is 100 years can we imagine that people coming in will take for granted all the previous decisions and will have to appropriate and to reconsider the value of those decisions and then join the club, join the game of decision-making while having their own perspective. It is not only that we have check points and we expect that there will be people – it is more complex than that.

P2: I take from my own experience that there will be an active opposition to such process of interactively educating public to be engaged in these issues because as it is seen by authorities in Czech Republic as an elite technical exercise which public has no right to say what so ever. And I think that the UK government is pretty close to that now and probably will get worse after we leave European Union and take the issue of government's been required the transparency article to ensure the opportunities public to participate has defined by the governments as we would give them some information and they would learn it and that was it and they do not want any interactive relationship with stakeholders in particular the critical stakeholders who might want actually to critically assess the information and develop an alternative perspective on this I think we almost are in the situation where the lips are paid by the government to public participation. They see it more like a propaganda exercise to give the publics a small amount of information with no consultation and in most cases the regulators are not strong enough to say that it is not acceptable. I think the only way around this is to continue the demand - there should be a resourced fund for critical appraisal of the project. The MKG model is the only one model I have seen that works. The waste creators have to create a fund and they

don't have any control how it is used though it can be used against them and their plans and to interrupt their plans. We don't have a resourced public- doesn't matter how much information we give them, they can't do it because they don't have an ability to do anything with it. Passive receipt of information is insufficient as an engagement process – it has to be interactive.

P1: You go in the line with the Bepper conclusions that adding a sort of forth pillar to the convention which is access to expertise and resources. There are several models. Of course, MKG is very convincing and I think that in France with this idea that TSO should perform the works not only for the regulator but also for the public is another way to achieve this though it might not also preclude the engagement of the independent experts and maybe can facilitate sometimes.

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**Group 2:**

Money. There are three main pillars pointed out during our discussion:

Brexit-> what is the inventory before the costs? The fact is that public has no access to the contracts so there is a violation of the transparency and openness to information laws.

Concurrence-> in the nuclear sector there is no concurrence between the interested parties. Can this fact affect the situation?

Where is the money? -> The situation about the funds is shadowed. Are the funds set up in advance?

How are the money managed?

It has been stated that public has no real idea about the costs and funds present nowadays. It has been proposed to have periodically updated costs table easily accessible to public sector. Also, funding should comply with the tax costs (case of Finland, for example). It has been pointed out the need to have an external evaluation of the costs. It has been proposed to waste generators pay in advance and not in proportion to generated energy. The example of Finland with regard to the costs and separate state fund has been chosen as one of the most efficient examples positively accepted by the public sector.

Transparency. Public involvement:

The legislation has to be updated in the countries where the Waste Directive has not been translated yet. The example of the MKG model should be taken into account and if possible implemented in every country. It has been pointed out that the tasks of the regulators have to be reconsidered. The regulator has to be given a priority task to engage the public.

**Group 3:**

There is a system in Hungary which on paper looks good and assures adequate funding but in reality will not solve many problems. A central Nuclear Financial Fund is part of state budget. Paks NPP contributes each year 98% of this fund. It is dedicated to RWM, SNFM, and decommissioning. Each year the government decides on the contribution level and also the expenses to be funded. A certain excess is accumulated for the future. But the money does not stay untouched on an account. It is used for state cash flow. A state audit found that this practice will be revealed as problematic in the future when larger expenses will be presented (eg the case of SNF management, when NPP will be no longer operating and therefore not contributing). This fund creates a false security. The state will have to pay back this "loan" at a future date and this is not fully recognized and not planned. A good funding system should assure that such funds are indeed sequestered and fructified – to cover unbudgeted hikes in cost which appear nonetheless likely.

In the UK the fund is indeed sequestered and well managed. But if and when a financial crisis arrives we may discover the limits of the actual management. Colin believes that the EC should issue a directive to centralize and guard this fund, especially given the history of political evolutions in the Member states (changes in regime and policy). How do you prepare for unknown unknowns? This is a

difficult question and among the solutions could be this Directive preventing the annual use of such funds to balance current accounts.

How should the funds be managed to ensure the value needed for all activities?

A ratchet mechanism, similar to paying off a mortgage – set a long term 20-30 year budget. What formula needed to ensure that the goal will be reached? Then audit each year. States that dip into the fund would need to revise the plan each year and obtain European sign-off.

A directive would be a good mechanism- a more detailed chapter than the requirement in the current Waste Directive which leaves the management to each member. How to assess yearly that the money is there? Etc. The decision makers matter – in Slovenia the audit has not been conducted for 10 years because the nuclear industry officials are responsible for the policy and they don't want to increase their contributions.

Culture – behavior and tools. If you say that Europe has to oversee it's saying that we cannot trust members – but what if we don't trust Europe either? The most important is ensuring that the mechanism is solid. How to find a behavior and memory on the importance of such funding.

EU already has the ability to fine members that don't meet objectives. Need a 50-year time graph to plan out, require of states to deliver their plans.

Multi actor oversight: ex. France implementers and producers present their estimate and funding plan on demand from Government, regulator says whether it is credible, and the high financial court audits in depth. So: who should be involved in the estimation of funds? Again in France, many actors are trying to develop an estimate for WM. This year, Andra said 33Bn needed, then EDF producer said NO it's 20Bn. Government pronounced it will be 25Bn. This is impossible to trust. The biggest issue is: the producers are still there – they will not be there later. IT's already a heavy burden on the producers to sequester these provisions because of the economic context. And it will not get better.

Hinkley Point NPP: government issued a funding plan; producers said “we cannot cover this”, so State accepted this and said that the State would take the shortfall – which means that present-day tax payers at any given (future) time will absorb the burden.

Regulatory point of view: it's not enough to have a 20-year vision. The implementer must demonstrate sustainability to its end (closure of repository – failure would be catastrophic for safety). To CS stakeholders this appears quite theoretical. The government will choose an amount that they know if feasible for producers. Thus, this generation will not solve the problem. It will most certainly be shared by FG. This trumps the argument of producers and implementers who say that we need to act now to preserve FG.

What about participation of future generations, especially in the case of irreversible decisions? What does CS need (competences, information, access...)?

CLIS de Bure: we are not thinking of the far future because for us, there is no decision at this time that the disposal will actually be authorized. The CLIS itself as a body will need to be reconfirmed and extended, and its duties redefined, should that authorization take place.

Mayors in Hungary: sitting in a room “talking of things they don't understand”. The professionals insist that participants in a decision-making process discussion have full professional qualification, otherwise they claim that the input is not legitimate.

UK produced 90% of its electricity through renewable for a few weeks recently. Denmark managed 100% this summer. If the demand is not there, in future perhaps government will not support nuclear industry. This puts even more pressure on ensuring funding contributions now.

There are new partnerships and initiatives to produce energy at very local scale meaning that it is not impossible that the nuclear industry collapses in a short time, at some juncture in future history.

We cannot change the past, what can we do for the future? If most of CS thinks that nuclear energy in future will be expensive and ineffective, why would they support it?

The waste is here today, a legacy of recent generations' decisions.

How to involve CS in future DM? We can ask – is there actually any decision making given the pre-determination of the issues? Today aspects of the management have become a local problem (and

other parts of the population think it's not their problem and request and consult no information). How to organize local participation, and deal with mobilization (through representatives). In France we do have a mechanism – Local Information Commission model at each nuclear facility. The operator and regulator are not part of the LIC but are regularly invited. The LIC has no decisional role. They can participate in 10-year inspections but in advisory role. However they can “alert public opinion” and lobby political and administrative decision makers (example ANCCLI, the national federation of LICs). In the UK we created the Cumbria Trust to fulfill such a role, which have created a true presence and are considered a credible discussion partner by high officials. They conduct door-to-door information surveys, asking neighbors if they are aware of the various issues (eg emergency planning provisions). It won't be an easy job however to ensure that future citizens are engaged and taken into account.

In Hungary we have LICs associated with existing and planned WM sites. These gather elected officials of these grey-haired municipalities. The townships receive contributions to their general budget as well as for information activities. These LICs have legal existence and ability to participate in DM. Indeed, this has become a local issue only in Hungary. But they are missing the opportunity to play a critical or watchdog role. The local citizens enjoy jobs and higher municipal services and thus perceive only benefit today. They are not much interested in getting more information and don't have any reason to rock the boat.

One part of the solution: not to consider the issue as a local one. It's why ANCCLI or Cumbria Trust try to broadcast the issues. The CLIS is not linked with the elected councils. We are funded by the government and have no role in local development or employment issues. The composition is mixed between pro and contra actors and the CLIS has no direct economic interest in the outcome of whether the facility is authorized or not.

Creating an actual influential role for such a commission? Cumbria Trust is not advocating for or against nuclear powers. Members can hold different views and may hold different jobs. The understanding is that RW exists and must be managed. We just want more public awareness and involvement. We are helping to progress the arguments. It's very helpful for us to come to meetings like and get information. We measure our success through our increasing membership and web hits. Even higher-ups in the UKRWM company accept direct calls. (The experience of 2 previous implementers being beaten has resulted in doors being opened finally.) Exposure of minor corruption in local councils is not beyond the remit of Cumbria Trust which collected 13K signatures to get rid of a third tier of government. If you engage with your public via an NGO open to everybody, asking for transparency and a fair game, you don't go wrong.

How to ensure that there are sufficient skills in such a local organization? You do need to take this to a national level. The Web is an opportunity to reach vast numbers of European citizens, and to mobilize them, particularly the younger generation. Students at A-level or baccalaureate/arbitur level can benefit from background educational material. It can also be adapted to other higher and lower education levels. This aims at attracting bright minds into the

Ensuring access to expertise and skill-building for CS in Hungary: 3 days for public to comment on Ministry documents, which were announced nowhere (only a professional looking at the site each day could find it). It was check-box consultation and there was little or no due account. First step: make decision makers aware of why CS participation is valuable to them and to safety. Which tools can really bring this into being? As an employee of an NGO I can spend my time reading and writing but I don't know how to engage people directly. Which groups are asked? People in academia are silent. CS is a lot of unskilled people. We reach out to them and get them to come to public hearings. But the announcement of these hearings is designed to deflate interest (the name of the affected community, the issues are not specified).

Evaluation of and influence on national programs: CLIS de Bure. We have the national management plan in France. As of last year the CLIS has been accepted as a statutory member of the evaluation working group including state actors, implementers, regulators, technical experts. IT allows us at least to be aware of what is happening and what is said. We can obtain and transfer information. But this is

not the same as having influence. Perhaps it will come with practice. We also have web-based consultation. The regulator sends the notice to the LICs or CLIS and with a proper period for effective response.

Europe-wide “engagement” (or actually information) with a web platform is proposal from member of NTW. User selects language and can choose topic ex. RWM financing. And see your country’s financing status on a meter, comparing to the estimated standard and to other states. Who feeds this site, who manages it, how is interest created, and what are the opportunities afterwards for each citizen to go farther and to input to the process in the interest of safety?

#### On the question of how to ensure funding is available for RWM

- Unclear how the calculations of fees are elaborated (estimates of future costs, assumptions about rate of return on funds). Would it be possible to develop a general structure to facilitate comprehension and comparisons between countries?
- These calculations are very complex and rely on assumptions that are uncertain so there is a need to re-examine them regularly.
- In the case of bankruptcy of a nuclear operator, how can the money needed be preserved and how can the public be sure that the money really exists? Funded resources needs to be separated from the nuclear power plant owners and also from Governments.
- Financial responsibility has to go back to parent energy companies, as nuclear power plants often are separate companies without assets to be used as economic guarantees.
- If necessary, financial responsibility needs to be taken over by the government despite the intention to avoid this. This has happened recently in Germany and may happen in in other countries that phase out nuclear power (Sweden, Switzerland etc.).
- Implementers, regulators, TSOs and civil society should all be involved and need to be vigilant that politicians don’t make decisions without the input of all of these parties.

#### How to ensure/organize necessary opportunities for public participation and access to information

- An important difference exists between the political culture in Central and Eastern Europe countries compared to Western European countries which limits the opportunities for public participation.
- Some knowledge of what constitutes a « good process » is helpful in these situations.
- Early involvement in projects is vital (before site selection) but it is often difficult to involve the public before the project becomes concrete (people tend to ‘worry’ when a project becomes concrete).
- Challenges exist because of not in my back yard (NIMBY) reactions and ‘not during my election term (or during the electoral process)’ reactions.

#### Content of national programs

- The process needs even more transparency with an obligation to publish national reports and programs. The programs should be published and the question becomes: What level and amount of information is pertinent? General information? Detailed technical information?
- What role should non-institutional experts play? How does the process take into account their concerns?
- A national radioactive waste management plan exists in France (the PNGMDR). This pluri-annual plan was built and is reviewed with civil society.

#### Governance aspects and involvement of civil society



- The importance of the issue needs to be recognized at the national and institutional level in order to make the necessary resources and funding available for CS participation.

The discussion was concluding with invitation to participants to respond on the questionnaire individually. The responds would be included in the final report without the names and organisations.

#### 4 CONCLUSIONS

The workshop in Brussels was the last meeting within the SITEX II workshops with civil society. The next workshop planned is international workshop with participants from international organisations and associations.

The results from the participation of civil society representatives in the process were very fruitful and bring a lot of good ideas how to improve the RWM and how to address the challenges. The CS representatives prove the importance of their role in raising many questions to nuclear actors and also points out important issues. True the cooperation with other SITEX members the better understanding of individual roles was made and relationships formed.

5 APPENDIXES

Appendix 1. Agenda\_SITEX\_II\_WS 3\_Brussels

**NOVEMBER 15-16, 2016 – BRUSSELS (BELGIUM)**

**SITEX-II WP5**

**WORKSHOP WITH CIVIL SOCIETY N°3**

**AGENDA**

**Location:** Bel V, Walcourt straat 148, 1070 Anderlecht, Brussels, Belgium

15 November

12.00	1 h	<i>Arrival of participants and lunch</i>	
13.00		Welcome and Agenda	Gilles Heriard-Dubreuil, (Mutadis)  Nadja Zeleznik (REC)
		<b>Task 4.1</b>	
13.10		Civil Society interaction in the continued development of a research agenda in the proposed SITEX network.  Possible Civil Society interaction and influence in future European RWM research including Joint Programming.  Link to WP 1.	Johan Swahn (MKG)  Gilles Heriard-Dubreuil, (Mutadis)
14.00		Plenary discussion	All Participants
15.20	30 min	<i>Coffee break</i>	
		<b>Task 4.2</b>	
15.50		Core message, summary and recommendations with regard to the results of the previous workshops/discussions/interviews on safety culture and conditions and means for public involvement along the safety case review process.	Maryna Surkova (FANC)

		Bottleneck points. Open- and close-ended questions. Link to the WP2.	
16.20		Plenary discussion	All participants
18.00		<i>End of the meeting day 1</i>	

## 16 November

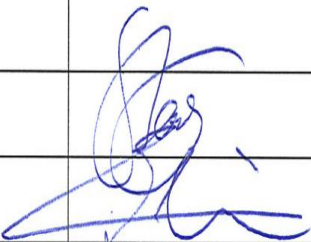

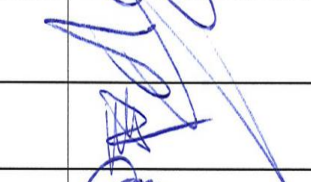

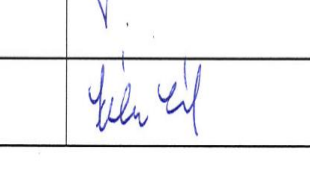

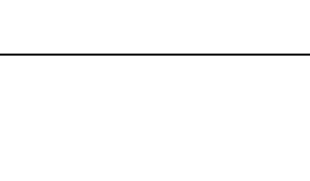

9.00		<i>Arrival of participants (coffee)</i>	
		<b>Task 4.3</b>	
9.00		Presentation of the PEP results	Gilles HeriarDubreuil (Mutadis)
9.20		Presentation of the questionnaire related to the Intergenerational governance	Nadja Zeleznik (REC)
9.40		Working Groups session	Moderators (TBD)
10.40	20 min	<i>Coffee break</i>	
11.00		Report of the Working Group	
11.30		Plenary Discussion	All participants
		<b>Conclusive Session</b>	
12.20	10 min	Next Steps	Gilles Heriard-Dubreuil, Julien Dewoghélaëre (Mutadis)  Nadja Zeleznik (REC)
12.30		<i>End of the meeting - Lunch</i>	

**Appendix 2 - Attendance list**

**List of participants**

**SITEX-II WP5 WORKSHOP, Meeting No.3**

Brussels, November 15, 16, 2016







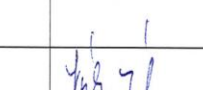
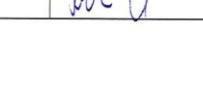


	<b>Participant</b>	<b>Organization</b>	<b>Signature</b>
1.	Autrusson Bruno	IRSN	
2.	Baudé Stéphane	Mutadis	
3.	Bernier Frédéric	FANC	
4.	Certes Catherine	IRSN	
5.	Detilleux Valery	Bel V	
6.	Dewo Julien	Mutadis	
7.	Gilli Ludivine	ASN	
8.	Gratton Laura	/	
9.	Grupa Jacques	NRG	
10.	Harembski Marcin	Common Earth	
11.	Hériard Dubreuil Gilles	Mutadis	
12.	Janssen Pierre	Bel V	
13.	Kobor Jozef	Green Circle of Pécs	

14.	Koritar Zsuzsanna	Energia Klub	<i>Koritar</i>
15.	Lowry David	Nuclear Waste Advisory Associates	<i>David Lowry</i>
16.	Mannaerts Koen	FANC	<i>Koen Mannaerts</i>
17.	Marignac Yves	Mutadis	<i>Yves Marignac</i>
18.	Mays Claire	Symlog	<i>Claire Mays</i>
19.	Metcalfe Phil	IRSN	<i>Phil Metcalfe</i>
20.	Mihok Peter	CEPTA	<i>Peter Mihok</i>
21.	Miksova Jitka	CVREZ	<i>Jitka Miksova</i>
22.	Mršková Adela	DECOM	<i>Adela Mršková</i>
23.	Narkuniene Asta	LEI	<i>Asta Narkuniene</i>
24.	Natunen Jari	Technology for Life	<i>Jari Natunen</i>
25.	Pellegrini Delphine	IRSN	<i>Delphine Pellegrini</i>
26.	Pfingsten Wilfried	PSI	<i>Wilfried Pfingsten</i>
27.	Surkova Maryna	FANC	<i>Maryna Surkova</i>
28.	Swahn Johan	MKG	<i>Johan Swahn</i>
29.	Verhoeven Marie Alix	NTW	<i>Marie Alix Verhoeven</i>
30.	Wales Colin	Cumbria Trust	<i>Colin Wales</i>
31.	Zeleznik Nadja	REC	<i>Nadja Zeleznik</i>
	<i>Benoit JARRET</i>	<i>cu's</i>	<i>Benoit</i>

List of participants

**SITEX-II WP5 WORKSHOP, Meeting No.3**

Brussels, November 15, 16, 2016

	Participant	Organization	Signature
1.	Autrusson Bruno	IRSN	
2.	Baudé Stéphane	Mutadis	
3.	Bernier Frédéric	FANC	
4.	Certes Catherine	IRSN	
5.	Detilleux Valery	Bel V	
6.	Dewo Julien	Mutadis	
7.	Gilli Ludivine	ASN	
8.	Gratton Laura	/	
9.	Grupa Jacques	NRG	
10.	Harembski Marcin	Common Earth	
11.	Hériard Dubreuil Gilles	Mutadis	
12.	Janssen Pierre	Bel V	
13.	Kobor Jozef	Green Circle of Pécs	

14.	Koritar Zsuzsanna	Energia Klub	<i>Koritar</i>
15.	Lowry David	Nuclear Waste Advisory Associates	<i>David Lowry</i>
16.	Mannaerts Koen	FANC	
17.	Marignac Yves	Mutadis	
18.	Mays Claire	Symlog	<i>CM</i>
19.	Metcalf Phil	IRSN	
20.	Mihok Peter	CEPTA	<i>Mihok</i>
21.	Miksova Jitka	CVREZ	<i>Miksova</i>
22.	Mršková Adela	DECOM	<i>Mrskova</i>
23.	Narkuniene Asta	LEI	
24.	Natunen Jari	Technology for Life	<i>Jari Natunen</i>
25.	Pellegrini Delphine	IRSN	<i>Delphine</i>
26.	Pfingsten Wilfried	PSI	
27.	Surkova Maryna	FANC	<i>Maryna</i>
28.	Swahn Johan	MKG	<i>Johan Swahn</i>
29.	Verhoeven Marie Alix	NTW	<i>Marie Alix</i>
30.	Wales Colin	Cumbria Trust	<i>Colin Wales</i>
31.	Zeleznik Nadja	REC	<i>N. Zeleznik</i>
	<i>Benoit JAQUET</i>	<i>GIS</i>	<i>Benoit</i>

## Appendix 3 – Presentation of safety culture investigation



CS\_workshop\_3\_Brus  
sels\_2016\_FINAL.pdf



## Appendix 4 – Presentation of Intergenerational Governance



WP4.3- workshop n3  
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## Appendix 5 – Questionnaire for moderated discussion in Workshop with Civil Society, No 3, Brussels, 15-16 November 2016

### Introduction

The objective of the moderated discussion is to reflect on and challenge the provisions and requirements related to intergenerational aspects of radioactive waste (RW) and spent nuclear fuel (SF) management, as set out in different international treaties/conventions and other EU binding legislation.

The following documents were reviewed and serve as inputs for the moderated discussion:

#### 1. COUNCIL DIRECTIVE 2011/70/EURATOM of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (Waste Directive)

Worldwide, the management of spent fuel and radioactive waste is governed by national legislation and the international conventions. Within the EU, this is supplemented by an EU Waste Directive which provides binding legal force to the main internationally endorsed principles and requirements in this field. The Waste Directive aims at ensuring a high level of safety, avoiding undue burden on future generations and enhancing transparency. It supplements the basic standards referred to in the Euratom Treaty as regards the safety of spent fuel and radioactive waste without prejudice to the Basic Safety Standards Directive.

§24 of the Waste Directive says *"it should be an ethical obligation of each Member State to avoid any undue burden on future generations in respect of spent fuel and radioactive waste including any radioactive waste expected from decommissioning of existing nuclear installations. Through the implementation of this Directive Member States will have demonstrated that they have taken reasonable steps to ensure that this objective is met."*<sup>1</sup>

#### 2. Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management, 1997, IAEA

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management was adopted by a Diplomatic Conference convened by the International Atomic Energy Agency at its headquarters in September 1997. Its preamble recognizes *"the importance of informing the public on issues regarding the safety of spent fuel and radioactive waste management and desiring to promote an effective nuclear safety culture worldwide"*. Article 4 on General Safety Requirements states that *"[e]ach Contracting Party shall take the appropriate steps to ensure that at all stages of spent fuel management, individuals, society and the environment are adequately protected against radiological hazards. In so doing, each Contracting Party shall take the appropriate steps to [...inter alia] strive to avoid actions that impose reasonably predictable impacts on future generations"*

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<sup>1</sup> Note that the end of the English language text is ambiguous; the French text, for example, may be translated: *"When implementing this Directive, Member States will demonstrate that they have taken reasonable steps..."*. In other words, it is indeed a requirement to show which reasonable steps have been taken. The English wording *stricto sensu* states that the mere fact of implementing the Directive constitutes a demonstration of such reasonable steps.

*greater than those permitted for the current generation and aiming to avoid imposing undue burdens on future generations."*

### **3. Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention), 1998**

The preamble of this UNECE treaty lays out the logic of this legal instrument:

*"Recognizing that adequate protection of the environment is essential to human well-being and the enjoyment of basic human rights, including the right to life itself. Considering that, to be able to assert this right and observe this duty, citizens must have access to information, be entitled to participate in decision-making and have access to justice in environmental matters, and acknowledging in this regard that citizens may need assistance in order to exercise their rights,*

*Recognizing that, in the field of the environment, improved access to information and public participation in decision-making enhance the quality and the implementation of decisions, contribute to public awareness of environmental issues, give the public the opportunity to express its concerns and enable public authorities to take due account of such concerns.*

*Acknowledging that public authorities hold environmental information in the public interest."*

### **4. Convention on environmental impact assessment in a transboundary context (ESPOO Convention), 1991**

This UNECE treaty states in preamble:

*"Aware of the interrelationship between economic activities and their environmental consequences and affirming the need to ensure environmentally sound and sustainable development. Also determined to enhance international co-operation in assessing environmental impact in particular in a transboundary context. With this convention a process of notification to the affected parties is defined in view of possible transboundary environmental impacts and opportunities for participation in the environmental impact assessment procedure are given."*

### **5. The NTW BEPPER report on "Transparency in Radioactive Waste Management"**

During 2015 an effort of Nuclear Transparency Watch (NTW) produced a report on transparency in radioactive waste management (RWM). Transparency in this context includes processes for public information and communication and public participation and engagement in decision-making.

The report reviews the present transparency regimes and describes ways forward for effective transparency in RWM.

The documents are briefly presented in the appendix including the links to the original texts.

### **Agenda and questions for the SITEX-II Civil Society Workshop moderated discussion**

The relevant elements from the international conventions and EU Waste Directive are:

- E. Member States should ensure that adequate funding is available for the management of spent fuel and radioactive waste, the costs of the management of spent fuel and radioactive waste shall be borne by those who generated those materials.

- Questions:

- How to assure (technically, financially, politically...) adequate funding by generators of RW and SF under unpredictable conditions (bankruptcy of the responsible generator, ....)?
  - Who (regulators, Technical Support Organisations (TSOs), Civil Society (CS) representatives...) should be involved in the decisions related to the present-day estimation of necessary funds?
  - How far in the future should such funding be available? How should funds and institutions be managed such that the future value of funds intended to be paid out over the long term is not greatly discounted?
  - .....
- F. With respect to the Transparency Article 10 in the EU Waste Directive it is required that Member States, in keeping with their national legislation and with international obligations, ensure a) necessary opportunities for the public to participate effectively in the decision- making process and b) provisions for information (to the extent that this does not jeopardise other nationally or internationally designated interests such as, inter alia, security).
- Questions:
    - How to organise decision making in the process of geological disposal establishment (for example in medium term periods of 20 to 40 years) taking into account public participation?
    - In your opinion which types of public participation opportunities should be ensured in priority? What is your justification: because they are most efficient, most fair, most feasible under current law, or for other reasons?
    - Some decisions taken in this period are not reversible: does it mean that the future generations are represented by current generations? Can this eventuality be properly taken into account by the decision-making process?
    - How could the participation in long term after closure of repositories be transformed into stable long-term forms to assure intergenerational representatives.
    - Is there any other possibility to take on board future generation in decision-making (also having in mind that the reversibility and retrievability in some management programs are developed only to obtain public acceptability)?
    - Which information could in fact jeopardize security, confidentiality, etc.? Should these limitations be reviewed today? Which concerns are justified, which appear unjustified from the point of view of public participation now and in the long term?
    - .....

G. The content of national programmes is prescribed in Waste Directive, foreseeing many obligatory chapters in which the whole RW and SF management approach should be explained with significant milestones and clear timeframes for the achievement of those milestones, concepts or plans, technical solutions for spent fuel and radioactive waste management from generation to disposal and post-closure issues including knowledge preservation. Among others there is also the responsibility for the implementation of the national programme and identification of the key performance indicators to monitor progress towards implementation.

○ Questions:

- How to organise participation of Civil Society in the evaluation of the national programs, especially in view of monitoring key performance indicators and actual implementation of the programs?
- Is the implementation review process as foreseen in the Waste Directive (and carried out in parallel with Joint Convention process) sufficient and effective?
- Which other possibilities may exist or should be created to participate in the review and monitoring of national programs, their content and implementation?
- .....

H. General considerations on the governance aspects stemming from the Aarhus and Espoo conventions:

○ Questions:

- How to assure the necessary technical competences of participants in the RW and SF management:
  - Example of Swedish approach with a dedicated CSO dealing with the topic continuously and obtaining the funding for the activities,
  - Relying on the TSOs and Regulatory Authorities to represent the CS,
  - Establishing a European CSO organisation (e.g. NTW) specialised in the independent evaluation of RW and SF management and obtaining direct resources from the European commission (EC),
- .....

### **The moderation**

During the workshop 3-4 groups with up to 8 participants will be established and a moderated discussion will take place. The moderators would be: Stéphane Baudé, Johan Swahn, Gilles Heriard-Dubreuil and Nadja Zeleznik.

The moderators would lead the discussion to address all questions under the topics A-D with also possibility to open discussion to new ideas. The foreseen time is 1 h, so for each of the topics approximately 15 minutes are available.

At the beginning of the group work a reporter should be agreed to present the results to the participants at the end of the meeting. The moderators are also asked to record the discussion and to help with development of written summary for the workshop minutes.

#### **Appendix to questionnaire:**

##### **Spent fuel and radioactive waste management directive**

Directive 2011/70/EURATOM establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste.

Worldwide, the management of spent fuel and radioactive waste is governed by national legislation and the international conventions. Within the EU, this is being supplemented by an EU Directive. The [Directive 2011/70/EURATOM \(link is external\)](#) establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste, adopted by the Council of the European Union on 19 July 2011, provides binding legal force to the main internationally endorsed principles and requirements in this field. The Directive takes into account expert inputs from ENSREG as well as the Euratom Scientific Expert Group that advises the European Commission.

The Directive aims at ensuring a high level of safety, avoiding undue burdens on future generations and enhancing transparency. It supplements the basic standards referred to in the Euratom Treaty as regards the safety of spent fuel and radioactive waste without prejudice to the Basic Safety Standards Directive.

This Directive reaffirms the ultimate responsibility of Member States for management of the spent fuel and radioactive waste generated in them, including to establish and maintain national policies and frameworks, and to assure the needed resources and transparency. Prime responsibility of the licence holder for the safety of spent fuel and radioactive waste management under the supervision of its national competent regulatory authority is also reaffirmed. Strong provisions are foreseen for assuring safety of spent fuel and radioactive waste management. The role of the national regulatory authorities is reinforced and their independence strengthened.

Each Member State remains free to define its nuclear fuel cycle policy. The spent fuel can be regarded either as a valuable resource that may be reprocessed or as radioactive waste that is destined for direct disposal. Whatever option is chosen, the disposal of high level waste, separated at reprocessing, or of spent fuel regarded as waste should be considered. The storage of radioactive waste, including long-term storage, is an interim solution, but not an alternative to disposal. To this end, Member States are obliged to establish and implement national programmes for management of spent fuel and/or radioactive waste from generation to disposal. Member States are obliged to notify to the Commission their national programmes by August 2015 and any subsequent significant changes.

Member States are obliged to ensure that necessary information on the management of spent fuel and radioactive waste is made available to workers and the general public, and that the public is given the necessary opportunities to participate effectively in the decision-making process regarding spent fuel and radioactive waste management in accordance with national legislation and international obligations.

Member States are obliged periodically, and at least every 10 years, to invite international peer reviews of their national framework, competent regulatory authority and/or national programme with the aim of ensuring high safety standards. The outcomes of the peer reviews shall be reported to the Commission and the other Member States. Member States are

obliged to regularly review and update their national programmes, taking into account technical and scientific progress as appropriate as well as recommendations, lessons learned and good practices from peer reviews.

This Directive entered into force on 23 August 2011 and all EU Member States shall bring into force their laws, regulations and administrative provisions necessary to comply with it by 23 August 2013. Member States' first reports on the implementation of the Directive shall be submitted to the Commission by 23 August 2015.

### **Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management**

The Joint Convention <https://www.iaea.org/sites/default/files/infcirc546.pdf> is the first international instrument that deals with the safety of management and storage of radioactive waste and spent fuel in countries with and without nuclear programs. It also considerably elaborates on and expands the existing IAEA nuclear safety regime and promotes international standards in this area. The Convention is aimed at achieving and maintaining a high level of safety in spent fuel and radioactive waste management, ensuring that there are effective defenses against potential hazards during all stages of management of such materials, and preventing accidents with radiological consequences.

The Convention covers the safety of spent fuel and radioactive waste management from civilian applications. It also applies to the management of military or defense-originated spent fuel and radioactive waste if and when such materials are transferred permanently to and managed within exclusively civilian programs.

The Convention calls on the contracting parties to review safety requirements and conduct environmental assessments both at existing and proposed spent fuel and radioactive waste management facilities. It provides for the establishment and maintenance of a legislative and regulatory framework to govern the safety of spent fuel and radioactive waste management.

The Convention establishes rules and conditions for the transboundary movement of spent fuel and radioactive waste that *inter alia* require a State of destination to have adequate administrative and technical capacity and regulatory structure to manage spent fuel or radioactive waste in a manner consistent with the Convention. It obligates a State of origin to take appropriate steps to permit re-entry into its territory of such material if a trans-boundary movement cannot be completed in conformity with the Convention.

The Convention provides for a binding reporting system that will address the measures taken to implement obligations under the Convention, including reporting on national inventories of radioactive waste and spent fuel. Each Contracting Party shall take, within the framework of its national law, the legislative, regulatory, and administrative measures and other steps necessary for implementing its obligations under this Convention. In the event of a disagreement between two or more Contracting Parties concerning the interpretation or application of this Convention, the Contracting Parties shall consult within the framework of a meeting of the Contracting Parties with the goal of resolving the disagreement.

### **Convention on access to information, public participation in decision-making and access to justice in environmental matters**

The United Nations Economic Commission for Europe (UNECE) [Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters](#) was adopted on 25 June 1998 in the Danish city of Aarhus (Århus) at the Fourth

Ministerial Conference as part of the "Environment for Europe" process. It entered into force on 30 October 2001.

The Aarhus Convention establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective. The Convention provides for:

- the right of everyone to receive environmental information that is held by public authorities ("**access to environmental information**"). This can include information on the state of the environment, but also on policies or measures taken, or on the state of human health and safety where this can be affected by the state of the environment. Applicants are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession;
- the right to participate in environmental decision-making. Arrangements are to be made by public authorities to enable the public affected and environmental non-governmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment, these comments to be taken into due account in decision-making, and information to be provided on the final decisions and the reasons for it ("**public participation in environmental decision-making**");
- the right to review procedures to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general ("**access to justice**").

### **Convention on environmental impact assessment in a transboundary context**

Environmental threats do not respect national borders. Governments have realized that to avert this danger they must notify and consult each other on all major projects under consideration that might have adverse environmental impact across borders. The Espoo Convention <http://www.unece.org/env/eia/eia.html> is a key step to bringing together all stakeholders to prevent environmental damage before it occurs. It was complemented by the Protocol on Strategic Environmental Assessment (Kyiv, 2003).

The Espoo (EIA) Convention sets out the obligation to assess the environmental impact of certain activities at an early stage of planning. Under the Convention states are obliged to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. The Convention was adopted in 1991 and entered into force in 1997.

The ESPOO convention compliance and enforcement system operates on the basis of national reports: the Convention requires that Parties submit national responses to questionnaires in every two or three years. This information is provided for the review of compliance. Under the review of compliance, the MOP (Meeting of Parties) established the implementation committee that provides assistance and orientation but it is not a judicial body. The eight members of the Implementation Committee (IC) are elected by MOP but election is not



restricted to government persons. It uses many sources for its activities: submissions by parties about compliance and a party to party system. The IC met for the first time with the new operation rules in force in October 2008.

### **The NTW BEPPER report on “Transparency in Radioactive Waste Management”**

The Executive Summary of the NTW BEPPER<sup>2</sup> report on “Transparency in Radioactive Waste Management” (<http://www.nuclear-transparency-watch.eu/a-la-une/new-publication-bepper-report.html>) states:

Effective transparency governance is essential for an enduring and constructive engagement of civil society in the area of radioactive waste management (RWM). Transparency in RWM is important as it can improve the safety of RWM projects, facilities and repositories. Effective transparency leads to better decision-making and can thereby increase civil society’s confidence in the quality and fairness of RWM decision-making processes.

National processes for transparency governance in RWM have been developed in the member states of the EU. These commonly reflect national implementation of the Aarhus Convention in environmental and nuclear legislation, but can be of a more or less advanced character. Although there has been much discussion and analysis of what transparency processes are effective, it remains unclear what effective transparency governance in RWM means and how it should be implemented.

With the adoption of the Radioactive Waste Directive (2011/70/Euratom), EU member states have to implement article 10 of the directive that deals with transparency. This opens up the possibility of a common European approach on transparency governance within RWM. As article 10 of the directive is rather vague there is a need for elaboration on what efficient transparency in RWM might mean.

The NTW BEPPER project has developed the NTW BEPPER pillars for effective transparency in RWM. The pillars are based on the Aarhus Convention pillars (access to information, access to public participation and access to justice) and also includes access to resources as well as more innovative processes for communication and decision-making, such as deliberation.

The four NTW BEPPER pillars are:

- Effective access to information and communication
- Effective access to public participation and consultation
- Effective access to justice and decision-making
- Effective access to resources

As well as the pillars the report presents two other approaches to effective transparency developed within the NTW BEPPER project:

- The NTW BEPPER key components
- The NTW BEPPER levels

#### *NTW BEPPER key components*

From the enquiries and analysis undertaken by the project team a set of key components for effective transparency in RWM have been collated. They have been influenced by and correlated with the inputs from the NGOs, experts and civil society representatives. The NTW

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<sup>2</sup> BEPPER stands for “Broad Framework for Effective Public Information and Participation in Environmental Decision-making in Radioactive Waste Management”.

BEPPER key components are presented in chapter 3 and are categorised into Principles, Practice, Resources and Innovation.

#### *NTW BEPPER levels*

The NTW BEPPER level system can be characterised as a tool for evaluating transparency in RWM and is presented in chapter 4. For each of the four NTW BEPPER pillars a number of levels of implementation have been identified where higher levels correspond to more advanced implementation. The levels thus reflect degrees of effective implementation in the domain of transparency in RWM.

Towards the end of the report some reflections on comparative evaluation of effective RWM transparency governance are made to indicate possible ways forward for comparing transparency governance in different countries.

Finally, the report offers some general reflections regarding transparency in RWM.

There are also two appendixes to the report summarising relevant research and experience from other processes on transparency in RWM as well as international and European governance on Transparency in RWM.