



## **Deliverable 9.19: Synthesis of Task 7 activities**

Work Package 9

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## Executive Summary

Deliverable 9.19 “Synthesis report of Task 7 activities” aims to provide summary of the ROUTES Task 7 activities on interaction with Civil Society. It entails a short overview of the objectives and structure of the task, summarizes main issues regarding transparency and public participation which goes beyond the Aarhus convention, address the public participation in radioactive waste management as a generic trend. One part describes basic double wing model of Civil Society interaction based on which public participation was organised in the EURAD programme. It also includes the possible extension of the model and enlargement to the triple wing model which can be used in the future. The report gathers the main outcomes from the performed activities in task 7 and describes the main results and derived recommendations which should be implemented in the future interaction with civil society. The overview of dissemination activities is presented in the five years of work package implementation with connections to the results. Some limited feedback has been collected and delivers additional insight on how Task 7 has been perceived within different groups.

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## Glossary

ACCC – Aarhus Convention Compliance Committee  
BEPPEP – Broad framework for Effective Public information and Participation in Environmental decision-making in Radioactive waste management.  
CS – Civil Society  
CSLG – Civil Society Larger Group  
EC – European Commission  
EESC – European Economic and Social Committee  
EU – European Union  
HLW – High Level Waste  
ICS – Interaction with Civil Society  
CSOs – Civil Society Organizations  
EIA – Environmental Impact Assessment  
IAEA – International Atomic Energy Agency  
KM – Knowledge Management  
LIMS – Large Inventory Member States  
MS – Member States  
NEA – Nuclear Energy Agency  
NGOs – Non-Governmental Organisations  
NPP – Nuclear Power Plant  
NTW – Nuclear Transparency Watch  
PEP – Pathway Evaluation Process  
PMO – Programme Management Office  
REs – Nationally funded Research Entities  
RD&D – Research, Development and Demonstration  
ROUTES – Waste management routes in Europe from cradle to grave  
RW – Radioactive Waste  
RWM – Radioactive Waste Management  
SEA – Strategic Environmental Assessment  
SIMS – Small Inventory Member States  
T&PP – Transparency & Public Participation  
TSOs – Technical Support Organisations  
UMAN – Uncertainty Management in a multi-Actor Network  
WAC – Waste Acceptance Criteria  
WMOs – Waste Management Organisations  
WP – Work Package  
WPM – Work Package Meeting

## 1. Introduction

ROUTES Task 7 “Interaction with Civil Society” has been carried out by CS (Civil Society) experts<sup>1</sup> with the following objectives to:

- facilitate the translation of scientific/technical results of the ROUTES WP to allow effective interaction with the CS larger group<sup>2</sup>, which was drawn from NTW’s wider membership and interested associations<sup>3</sup>.
- create the conditions for the CS larger group to express its expectations or views linked to the topics addressed in the ROUTES WP,
- improve mutual understanding on the RD&D needed to develop safe acceptable solutions in processing and disposal of radioactive waste.

Task 7 has 3 consecutive subtasks with the following aims:

- To prepare scoping of ROUTES tasks 2 to 6 objectives and actions in order to identify issues that are deemed of more specific interest in the perspective of developing interactions between Civil Society and EURAD partners along the course of the WP. The structure of Task 7 also facilitates the organisation of experts to be able to follow the activities in other tasks of ROUTES and to update the initial plan based on the yearly development and evolution of the WP [1.].
- To develop, for each year, one deliverable, devoted to a particular topic, based on the work in other ROUTES tasks. This involved discussions with panels of WMOs, TSOs and REs participants involved in ROUTES, together with civil society experts and interactions with larger CS group in the dedicated yearly workshops. The draft versions of deliverables are discussed during ROUTES annual meetings [2.], [3.], [4.].
- To summarise the conducted work in Task 7, covering the interaction framework developed and used in the work package, and including recommendations for future CS interaction within potential next joint programmes for RWM (this deliverable).

CS experts involved in ROUTES Task 7 organised themselves at the beginning of EURAD in 2019. First, based on the objective of task it was agreed that Task 7 members have to assure:

- collaboration with the different ROUTES tasks (tasks 2 to 6, and later additional task 8 which started in year 3) and participation in the coordination at the WP level, Task 1,
- management of and exchange on activities performed within Task 7, and
- interaction with the CS larger group which is organised in the frame of the EURAD PMO WP 1, Task 8.

For the day-to-day management and collaboration with the ROUTES WP coordinator and tasks leaders it was agreed that the responsibility is taken by co-leaders of the Task 7 who have experience in project management and have participated also in previous EURATOM projects. The co-leaders also present Task 7 in different ROUTES meetings, like the kick-off meeting and tasks leaders’ meetings. It was decided that Task 7 CS experts’ meetings will take place at least every two months for exchange of information, discussion of important questions raised in the tasks and exchange of views arising from the work.

The CS experts of Task 7 also decided to form small teams, consisting of two CS experts each, to closely follow the activities in the individual ROUTES tasks based on their experience, interest, education and also their locality in order to reduce travel costs. For each of the ROUTES tasks, a CS expert was assigned as main contact person and another as stand-in to follow development in the

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<sup>1</sup> The term “CS expert” should be understood in the wider sense as “knowledgeable person” or “person recognized as such”, typically ranging from academics and non-institutional experts with a scientific background to people spending significantly more time than the average population on the issues raised by RWM.

<sup>2</sup> The model used for interaction with the civil society is described in the chapter 3 of this deliverable.

<sup>3</sup> Process of identification of CS larger group is presented in D1.13 <https://www.ejp-eurad.eu/publications/eurad-d113-list-cs-group-members>



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respective task. Both experts were also supposed to attend task meetings either in person or virtually and to take notes for better exchange with other Task 7 members. Some other members also expressed their interest to be more actively involved.

Although the interaction with other EURAD partners and the CS larger group is organised in the EURAD PMO WP1, Task 8, it was agreed that all Task 7 CS experts will participate in those activities. The main objective of this interaction is to obtain feedback from other CS experts in EURAD and the CS larger group and adopt the viewpoints in the deliverables that Task 7 is responsible for.

## 2. Transparency and Public Participation beyond the Aarhus Convention

Transparency and Public Participation (T&PP) in RWM has been the major theme addressed within the Task 7. This theme has a basis in various legal documents such as international conventions, EU directives and other EU legislation, which subsequently are transposed into national legislation. Even more, through the years of implementing RWM activities, and in particular establishment of RW repositories, in Europe some examples of T&PP have developed which go beyond the basic requirements.

### 2.1 T&PP based on the Aarhus Convention

All EU member states and the EU itself are parties to the Aarhus Convention<sup>4</sup> that protects every person's right to live in an environment suitable for his or her health and well-being. The convention constitutes an environmental agreement as well as an agreement on government accountability, transparency and responsiveness. It is based on three pillars, granting the public rights and imposing on the parties to the Aarhus Convention obligations in regard to access to environmental information, public participation in decision-making affecting public health and/or the environment, and access to justice in environmental matters. Moreover, the Aarhus Convention is also forging a new process for public participation in the negotiation and implementation of international agreements.

The countries that are parties to the Aarhus Convention are obliged to implement it in their national legislation. However, in reality, the level of implementation varies considerably and there are a range of constraints and challenges to be addressed. The parties' implementation of the convention is under continual review with the Aarhus Convention Compliance Committee (ACCC) that examines communications of alleged non-compliance by the parties, including those brought by individuals, NGOs, and other actors in the convention.

The most important parts of the Aarhus Convention are the Articles 1 to 9:

- Art. 1 explains the **Conventions' objective**, which is to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being.
- Art. 2 provides **legal definitions** of the relevant concepts, including a definition of the public concerned which in this context means the public affected or likely to be affected by, or having an interest in, the environmental decision-making.
- Art. 3 defines several **general principles**, including an obligation for authorities to assist the public, to promote the principles of the Convention, and a prohibition of any form of harassment of citizens or NGOs executing their rights under the Convention.
- Art. 4 deals with **access to environmental information**, which should be made available to the public as soon as possible, unless there are valid grounds why it may be refused.
- Art. 5 describes the **obligations for authorities** to pro-actively publish environmental information to the public.
- Art. 6 provides principles on **public participation in decisions on specific activities** and describes the envisaged procedure, the objects of the decision-making, timeframes, responsible authority/-ies and other important issues. Annex I lists the related installations, among them also RWM facilities for the processing of irradiated nuclear fuel or HLW, for the final disposal of irradiated nuclear fuel, for the final disposal of RW and for the storage (planned for more than 10 years) of irradiated nuclear fuels or RW at a different site than the production site. Regarding

<sup>4</sup> Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 1998, <https://unece.org/environment-policy/public-participation/aarhus-convention/text>

public participation, it is noteworthy that the convention stresses the importance of early participation when all options are open, and the obligation for the authorities to take due account of the outcome of the public participation.

- Art. 7 deals with **public participation concerning plans, programmes and policies** related to the environment, following the general provisions in Art. 6.
- Art. 8 obliges parties to strive for **public participation during the preparation of executive regulations** and/or generally applicable **legally binding normative instruments**, also following the general provisions in Art. 6.
- Art. 9 provides **access to justice** by among others ensuring that each party to the convention within the framework of its national legislation sees to it that any person who considers that request for information has been not dealt with, has access to a review procedure before a court of law, or each affected party, including NGOs, whose right on public participation has been refused has access to court.

In 2015, the Maastricht Recommendations on Public Participation in Decision-Making<sup>5</sup>, developed under the Aarhus Convention, were adopted with the aim to assist policymakers, legislators and public authorities in their daily work of engaging the public in decision-making processes. The recommendations provide helpful guidance for engaging stakeholders in order to improve decision-making, planning and implementation of policies and programmes at all levels. They can also be followed in case of implementation of the Espoo Convention<sup>6</sup>.

## 2.2 Related EU directives

In 2003, the EU adopted two directives concerning the first and second pillar - mainly described in Articles 6 and 7 - of the Aarhus Convention. They were to be implemented in the member states' national law by 2005:

- Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information (the so-called EIA Directive<sup>7</sup>).
- Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (the so-called SEA Directive<sup>8</sup>).

The obligations of EU institutions and bodies under the Aarhus Convention were also legislated under the so-called Aarhus Regulation<sup>9</sup> by laying down rules to apply the provisions of the Aarhus Convention and to contribute to the implementation of the obligations arising from the convention.

<sup>5</sup> Maastricht Recommendations on Promoting Effective Public Participation in Decision-making in Environmental Matters, 2015, [https://unece.org/DAM/env/pp/Publications/2015/1514364\\_E\\_web.pdf](https://unece.org/DAM/env/pp/Publications/2015/1514364_E_web.pdf)

<sup>6</sup> Convention On Environmental Impact Assessment in a Transboundary Context, 1991, [https://unece.org/DAM/env/eia/documents/legaltexts/Espoo\\_Convention\\_authentic\\_ENG.pdf](https://unece.org/DAM/env/eia/documents/legaltexts/Espoo_Convention_authentic_ENG.pdf)

<sup>7</sup> Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003L0004>

<sup>8</sup> Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003L0035>

<sup>9</sup> Regulation 1367/2006/EC of the European Parliament and of the Council of 6 September 2006 on the application of the provisions of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to Community institutions and bodies <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006R1367>

In the Council Directive 2011/70/Euratom<sup>10</sup> transparency and public participation is addressed in several points. First, the transparency is mentioned in recital 31 in the preamble of the Radioactive Waste Directive stating: “Transparency should be provided by ensuring effective public information and opportunities for all stakeholders, including local authorities and the public, to participate in the decision-making processes in accordance with national and international obligations”. According to the directive, EU member states are required to include a description of their transparency governance in RWM in their national programmes and reports as required by the directive. The directive’s article 10 (Transparency) has the following provisions:

*“1. Member States shall ensure that necessary information on the management of spent fuel and radioactive waste be made available to workers and the general public. This obligation includes ensuring that the competent regulatory authority informs the public in the fields of its competence. Information shall be made available to the public in accordance with national legislation and international obligations, provided that this does not jeopardise other interests such as, inter alia, security, recognised in national legislation or international obligations.*

*2. Member States shall ensure that the public be 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.”*

At the EU level, the ENSREG (European Nuclear Safety Regulators Group<sup>11</sup>) work on openness and transparency should also be mentioned. Its Guidance on Openness and Transparency for European Nuclear Safety Regulators<sup>12</sup> provides general guidance to regulators for ensuring openness and transparency in their communication activities. It is generic in nature, intended for the regulatory bodies (and not implementers of the activities) and may need to be adapted to the organisational structures of member states, taking into account the financial and personnel feasibilities of each regulator, and taking into account their obligations under international law, including the Aarhus Convention.

## 2.3 Civil Society on transparency and public participation

In 2014 and 2015, NTW<sup>13</sup> (a French-based association dealing with safety – understood as a Common<sup>14</sup> – and transparency in the nuclear sector) worked on a project to investigate and document how effective transparency (i.e., public information and participation) in RWM could manifest itself. The result was the BEPPER report<sup>15</sup>.

Besides the three pillars of transparency presented in the Aarhus Convention on access to public information, access to public participation, and access to justice, the BEPPER report sets out a fourth pillar with effective access to resources. It also goes further in establishing a multi-level system for evaluation of effective transparency in RWM with regards to the 4 pillars in question.

The report also discusses the key components of effective transparency needed in RWM: principles (e.g., building societal confidence, adopting a multi-generational perspective, considering public perceptions of safety and risk, taking into account energy policy), good practices (e.g., enhancing dialogue in pluralistic spaces, demystification and democratisation, adoption of new decision-making processes, establishing horizontal as well as vertical information exchanges, implementing and

<sup>10</sup> 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: EUR-Lex -32011L0070 - EN - EUR-Lex: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32011L0070&from=EN>

<sup>11</sup> <https://www.ensreg.eu>

<sup>12</sup> Guidance on Openness and Transparency for European Nuclear Safety Regulators, 2019, [https://www.ensreg.eu/sites/default/files/attachments/guidance\\_for\\_regulators\\_on\\_openness\\_and\\_transparency\\_0.pdf](https://www.ensreg.eu/sites/default/files/attachments/guidance_for_regulators_on_openness_and_transparency_0.pdf) .

<sup>13</sup> <https://www.nuclear-transparency-watch.eu/>

<sup>14</sup> <https://www.nuclear-transparency-watch.eu/wp-content/uploads/2024/03/Nuclear-safety-and-the-Common.pdf>

<sup>15</sup> Broad framework for Effective Public Participation in Environmental decision-making in Radioactive waste management, 2015, <https://www.nuclear-transparency-watch.eu/a-la-une/new-publication-bepper-report.html> .

facilitating access to justice), components on innovation in resources and transparency assessment (e.g., make sure that CS has the resources to participate, create the conditions for CS access to expertise, engage experienced and widely trusted facilitators, develop libraries, compendia, websites of good practices, etc, and elaborate standards for transparency assessment).

## 2.4 Societal requirements

The basic idea adhered to by the CS group in the scaling of dialogue, democracy and commonality is that the notion of *fruitful interaction* as elaborated in the investigation on the societal requirements is not aimed at providing a sort of binary grid of assessment. It rather suggests a gradient of interaction on the basis of which one can produce a more gradual assessment of the performance of the interactive processes<sup>16</sup>. The overall perspective of achieving fruitful interactions is the main landscape in which this dialogue takes place, while the ultimate purpose of such interactions lies in the structuring value of enhancing safety in RWM.

The criteria for fruitful experts-citizens interactions were jointly elaborated by the CS group on the basis of a series of interviews of multiple RWM actors. They offered a broad view of the main requests and expectations that condition the quality, involvement and significance of those interactions for the actors. The use of the criteria could be summed up in the following way:

**Legitimacy.** Fruitful interactions necessitate processes where all actors can dialogue on the same footing.

**Methodology.** Fruitful interactions require that a community is able to carry variety of inquiries (scientific, moral, social)<sup>17</sup>.

**Postural changes.** Fruitful interactions depend on the capacity of all actors to encompass others' views and to enlarge their initial perspective.

**Personal unity.** For fruitful interactions, one needs to take into account the different dimensions of him/herself.

**Expertise function.** Fruitful interactions require a pluralistic expertise that therefore cannot be reduced to a sole scientific process<sup>18</sup>.

**Meaning of the repository.** Fruitful interactions include exchanges on the meaning of the existence of repository in the concrete life of people.

**Territory.** A geological disposal has a deep impact on the meaning people give to living in a territory. Fruitful interactions must integrate this impact in the discussions.

**Shared complexity.** Having fruitful interactions necessitate to address the complexity of the issues (technical and non-technical) linked to geological disposal.

**Addressing the long term.** Fruitful interactions cannot be meaningfully achieved without an intergenerational perspective, given the extreme timescales.

<sup>16</sup> EURAD Deliverable 1.14: Mid-term evaluation of the ICS activities and experimental model of interaction between EURAD participants and Civil Society. The Deliverable also sets out criteria for the achievement of fruitful dialogue.

<sup>17</sup> "The methodology of research and innovation is commonly a guiding tool of investigation for the type of inquiries that are achieved mainly in the fields of science or engineering. Some critics of this view, like John Dewey, in the wake of Peirce's works within the stream of pragmatism, pointed out that an inquiry is achieved by the members of a community of inquiry and can be a scientific inquiry, but also a moral inquiry and a social inquiry. The first challenge of a methodology of complex common inquiry is to gather a variety of members, with sometimes very different profiles (experts, users, citizens, novices...), to form a productive and effective community of inquiry. The second challenge is to combine in a process of investigation a variety of types of inquiries (scientific, moral, social...) in keeping some coherence in the co-production and some motivation of the actors" in EURAD Deliverable 1.14: Mid-term evaluation of the ICS activities and experimental model of interaction between EURAD participants and Civil Society. The Deliverable also sets out criteria for the achievement of fruitful dialogue.

<sup>18</sup> It refers to both technical and socio-technical fields where socio-technical can relate to social science and citizen expertise in the sense of participatory citizen science. A reliable citizen expertise depends not only on access to information but also on means given to the civil society.

## 2.5 Public participation as a generic trend

Historically, trends in public participation have favoured *deliberative democracy*, where power is exercised through public exchange of opinions, information and arguments between equal citizens, with a view to decision-making, have in some respects gone beyond the Aarhus Convention. Not least, they have manifested themselves in the forming of citizens panels, initially in France<sup>19</sup>, but also at the European level with the introduction of *The Conference for the Future of Europe*<sup>20</sup>, which is probably modelled on the former, considering that it was France and Germany that pushed for the latter. Also, in EU's own institutional framework, ICS was implemented on a permanent basis long ago in the founding treaties, with *The European Economic and Social Committee (EESC)*, cf. Art. 13 in the Treaty on EU<sup>21</sup>. Similar measures have been implemented in other countries and at regional and local levels. Also, citizen science, i.e., when members of the public voluntarily help conduct scientific research and design experiments, collect data, analyze results, and solve problems, is increasingly valued by the EU<sup>22</sup>. A common prerequisite for these attempts to enhance dialogue and deliberative democracy to succeed is mutual respect between in the interlocutors and that conditions for fruitful interaction are met.

With the EURAD project, proactive public participation was for the first time introduced in a EURATOM research project and possibly in a large-scale EU-funded research project, which makes it groundbreaking, and in line with these trends of increased public participation.

As a continuation of these trends and considering that public participation is a dynamic concept that must adapt to the conditions, under which it manifests itself, and develop when these conditions change, more knowledge is gathered and lessons are learned, the initial model for public participation in the first phase of the EURAD project – the civil society double wing model – could develop into a triple wing model in the second phase of the project (see Chapter 3 below). The triple wing model appears to more capable to efficiently integrate broader and more diverse segments of civil society into EURAD.

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<sup>19</sup> The dialogue process included inputs from the entire population, which none the less was selected and edited to facilitate work on the proposals. Of the climate citizens' assembly's 149 recommendations, 146 were accepted by President Macron. The recommendations were made "without filter", partly in the form of a proposal for a referendum, because the recommendations included a proposal for a constitutional amendment, partly as a legislative proposal and partly as a proposal for administrative measures. The proposed constitutional amendment, which was accepted by the president, aimed to strengthen the protection of biodiversity, environment and climate. Homepage, La Convention Citoyenne pour le Climat: [Site officiel de la Convention Citoyenne pour le Climat](https://www.laconvcitoyenne.fr/)

<sup>20</sup> Homepage, The Conference for the Future of Europe: [Conference on the Future of Europe \(archive-it.org\)](https://www.conference-for-the-future-of-europe.eu/)

<sup>21</sup> The EESC has 329 members, drawn from economic and social interest groups in Europe. They are nominated by national governments and appointed by the Council of the European Union for a five-year period. Consultation of the EESC by the Commission or the Council is mandatory in certain cases and in others optional. The EESC may, however, also adopt opinions on its own initiative. Homepage, EESC: [About | EESC \(europa.eu\)](https://www.eesc.europa.eu/)

<sup>22</sup> E.g. see: <https://eu-citizen.science/>



### 3. Interaction with civil society framework

Public participation was organised in EURAD on the basis of several participatory models. The primary CS engagement model used was the double-wing model (Figure 1) and latterly the triple wing model (Figure 3) which was developed within the frame of the UMAN’s CS group. The triple wing model largely evolved in response to the challenges that the EURAD CS group had to overcome, e.g., its formal and legal status, access to funding, and scepticism in other parts of the EURAD project. The triple wing model has the benefit of including representatives from local communities and a broader spectrum of a more diverse range of other European organisations,

Arguably, the conditions for effective interaction with CS within research and development in RWM could be compared to the conditions for effective transparency in the governance on decision-making in RWM: transparency in decision-making is essential for the enduring and constructive engagement of CS and could therefore be generally important for improving the safety of RWM projects, facilities and repositories.

#### 3.1 The double wing model

The model of interaction with CS applied in ROUTES and the EURAD project, as illustrated in *Figure 1*, was first presented and described in *Deliverable 1.13* [5.]. A group of representatives of civil society - the CS larger group – was established at the start of EURAD via an open call by the EURAD consortium to civil society organisations, such as local communities having interest in RWM (local associations, local committees of information, local partnerships), national or European CS Organisations taking part in interactions in the field of RWM at the national or European level. The selection of the CS larger group is also described in EURAD deliverable “D1.13 List of Members of the Civil Society Group”. Furthermore, the double wing model has also briefly been described in ROUTES Deliverables 9.15 [1.].

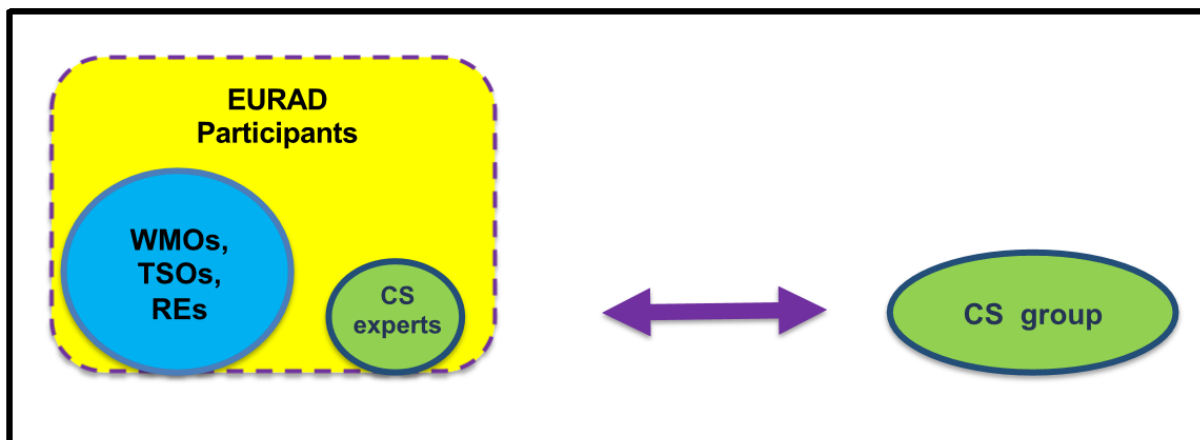


Figure 1 – Double wing model of interaction with civil society in EURAD

In addition to the candidates demonstrating long-standing engagement in RWM activities, the composition of the CS larger group had to assure appropriate representation from more and less advanced RWM programmes, as citizens from Western and Eastern European countries, as people with various interests in different fields related to RWM (health, environment, science, energy, etc.) and as persons of different genders, generations, social backgrounds or types and levels of education .

The interactions with the CS larger group were administered by CS facilitators (also called CS experts), in this case working for a linked third party to mandated actors in EURAD, and actively involved in the EURAD WPs. The CS experts all had long-term engagement in RWM and/or skills/experience in the involvement of CS in scientific and technical issues. They interacted with the institutional experts from the WMOs, TSOs and REs in order to understand the fields of study and to prepare interactions with the CS larger group. This process enabled the CS larger group members to express their own views on

these activities. The CS experts work in an organised process together with representatives from WMOs, TSOs and REs in EURAD.

As can be observed in Deliverable 1.13 and later from their activities in EURAD, the screening of both CS categories was thorough and efficient, which was necessary, considering the complexity and in some cases demanding workload of the EURAD project.

The structure of the ICS activities in EURAD, based on the Double Wing model, is presented in *Figure 2*. As the figure shows, CS teams of experts were directly involved in the Strategic Studies WPs in UMAN and in ROUTES, and in the EURAD Programme Management Office (PMO) WP 1 (Task 8 – Coordination, organisation and reporting on interaction with CS).

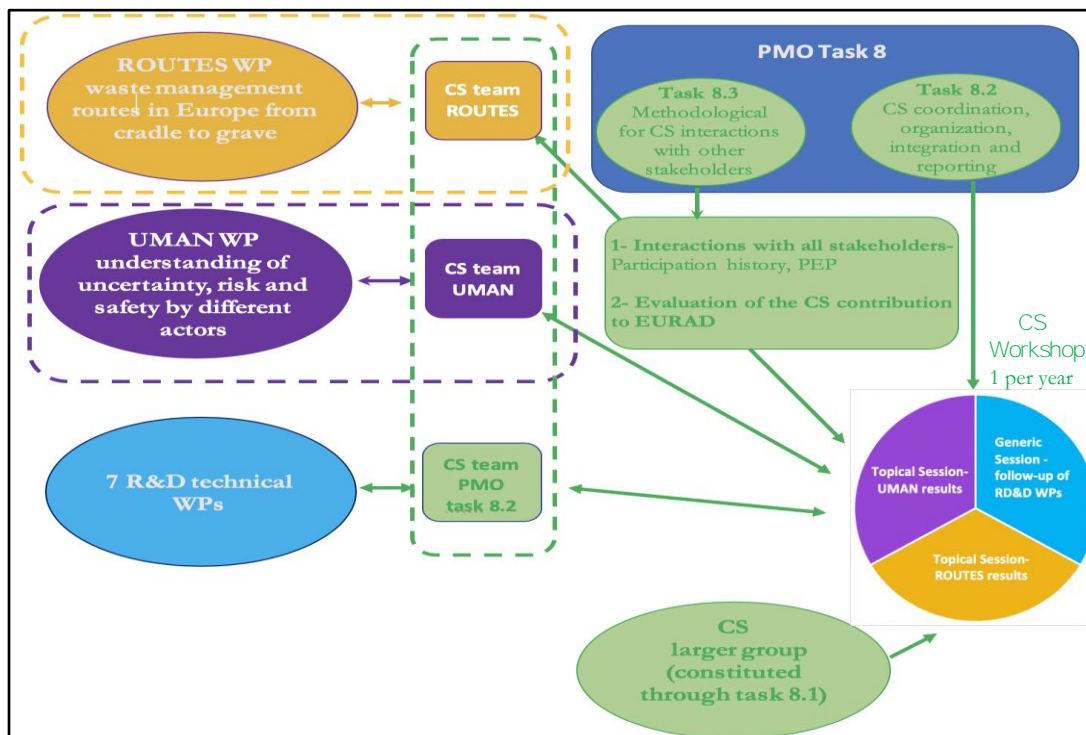


Figure 2 – Interaction with Civil Society in EURAD

During the five years of EURAD CS involvement, the double wing model was met with increasing acceptance and appreciation by the three colleges and most of the initial scepticism registered in some cases regarding CS involvement in such a programme was overcome due to not least trust building among the participants though time. However, mostly due to lack of resources, NTW had difficulties maintaining the CS larger group over this long duration. Furthermore, ICS not only in EURAD, but in society and the EU in general, is seen by some as an ideologically loaded concept, and therefore politically questionable, which could have affected the reception of the double wing model negatively. Also, not all members of the three colleges attended events, organised or co-organised by CS experts, or attended events, in which CS experts took part, which could also have had a negative impact. However, this could be perceived as of little importance, when balanced against the added value that ICS has brought to the EURAD project.

### 3.2 The triple wing model

Given the CS group might face the same problems within the frame of EURAD regarding future activities as WMOs, REs and TSOs outside of EURAD, when they aim to ensure the future availability of skilled nuclear sector professionals, the double wing model could develop into a *triple wing model*, where members of CS are accepted into EURAD, although they have not necessarily been engaged in RWM in their capacity as CS, have not acquired knowledge of aspects of RWM, or shown interest in regard



to RWM. Nonetheless, this could be a way to expand and diversify the pool of CS members involved in future activities<sup>23</sup>.

The added value of a triple wing as shown in *Figure 3* would be to demonstrate the efficiency of the double wing model, when faced with other segments of CS, as well as expand the field of recruitment for the CS larger group, including notably local communities and CS members from European organisations like representatives of EESC<sup>24</sup> for instance.

The benefit of the triple wing model is that it embraces greater CS inclusivity and as a consequence is more representative of CS generally, although implementation will pose some challenges which will have to be overcome, not only by the CS experts, but also by EURAD’s three colleges, when they present and disseminate their findings, conclusions, and recommendations to the wider public. Some tools developed or/and tested during EURAD (like PEP<sup>25</sup> monitoring and PEP near-field tools) can be used to facilitate the discussions during specific events held to disseminate results and organise exchanges with the wider public.

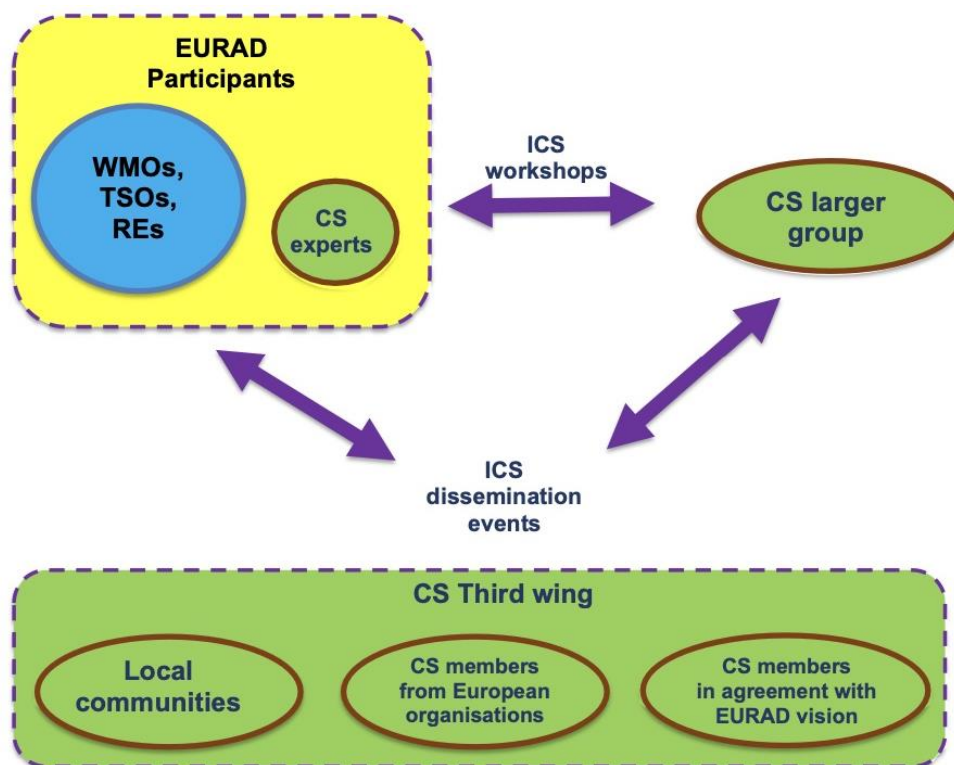


Figure 3 – Triple wing model of interaction with civil society in EURAD

<sup>23</sup> How to enlarge civil society involvement in EURAD (number and type of representatives) and to construct a triple-wing model was discussed during one of the ICS workshops (no 4 and no 6). The exchanges focused on how to include CS participants in future RWM research activities, who have little knowledge about RWM, how to enlarge the number of CS participants involved in the dissemination process, and how to improve the ICS model in EURAD. One of the solutions that was suggested was to add a third wing to the current double wing model, involving local communities and other actors who have had no or little experience with RWM.

<sup>24</sup> Part of this expanded field of recruitment could, e.g., be the EESC (see Note 18) and members of local communities.

<sup>25</sup> The PEP is a tool of dialogue (designed as a serious game) developed under the frame of the SITEX-II project and SITEX.network that enable multi-actors’ discussions in the field of radioactive waste management. EURAD Lunch and Learn Session on PEP methodology: <https://www.ejp-eurad.eu/news/recording-ii-pluralistic-tool-dialogue-rwm-pathway-evaluation-process-pep>

## 4. Synthesis of outcomes

The major outcomes of the ROUTES Task 7 activities are divided into sub-chapters: one dealing with the direct deliverables<sup>26</sup> and the other summarizing the recommendations from deliverables, also providing suggestion for future ICS.

### 4.1 Results

In Task 7 of ROUTES WP the CS experts developed several deliverables as part of the work implementation. In the first year, a scoping report D9.15 was prepared [1.] with the aim to identify specific topics addressed in ROUTES Task 2 to 6 that are deemed of more specific interest in the perspective of developing interactions between Civil Society and EURAD partners along the course of the WP and to propose an action plan for Task 7 work with interaction with civil society for the years 2 to 4 of the project was developed. The action plan is a dynamic proposal and has been further revised each year to include the developments of the work done, the results produced in tasks 2 to 6 in the ROUTES WP and the interaction activities with the CS larger group. The proposed topics for the overall work for years 2 to 4 included:

- In Task 2, “Identifying challenging wastes to be collaboratively tackled within EURAD”, the main interest was in discussion and description of inventories of challenging wastes for many countries and dissemination of the information to different audiences (larger CS group, general civil society).
- In the frame of Task 3 on “Description and comparison of radwaste characterisation approaches” and Task 4 on “Identification of Waste Acceptance Criteria (WAC) used in EU Member States for different disposal alternatives in order to inform development of WAC in countries without WAC/facilities”, the group of CS experts decided to assist in communicating the work to the larger CS group. Later on, it was also agreed that feedback from CS experts during participation in the dedicated workshops and webinars was serving as inputs for development of deliverables in the Task 3 and 4 where recommendations with regard to WAC<sup>27</sup> could provide a tool for confidence building amongst civil society.
- In Task 5, “RWM Solutions for small amounts of waste”, and later extended ROUTES with Task 8 “RWM Solutions for small amounts of waste – extension”, the focus was on the examination of how the conditions for CS involvement in small inventory member states (SIMS) differ from CS involvement in large inventory member states (LIMS) and what we can learn from current development. Two deliverables were produced with these regards:
  - View on CS and other public involvement in SIMS and in LIMS with focus on transparency and public participation, search for commonalities and differences, factors with impact, like transparency level (according to discussions in the BEPPER report produced by Nuclear Transparency Watch (NTW)<sup>28</sup>: information availability, quality and access, participation in decision-making, access to legal recourse, including CS resourcing) to identify criteria, practices and recommendations.
  - Investigation of conditions and examples of transparency and public participation for more technical topics related to RWM, and especially for establishment of RW disposal. In this context also exploration of how short- and long-term governance and CS engagement could be organised in RWM activities.
- In the frame of Task 6, “Shared solutions in European countries”, the work of Task 7 concentrated on the issue of understanding what “shared solutions” can mean as well as the public perception

<sup>26</sup> All the deliverables have significant lists of references for further readings.

<sup>27</sup> Definition is summarised in the §6.2 of the deliverable D9.9:

<https://www.ejp-eurad.eu/publications/eurad-d99-routes-suggestions-management-challenging-wastes>

<sup>28</sup> <http://www.nuclear-transparency-watch.eu/a-la-une/new-publication-bepper-report.html>

of transnational or shared nuclear facilities, particularly storage and repositories for nuclear waste, as a key issue with respect to CS involvement. The CS experts looked into how the understanding of the public perception of shared nuclear facilities between two or more MS differs from public perception of nuclear facilities within one Member State, if at all, and how a process of localization of a shared nuclear facility, involving all the relevant stakeholders could be structured.

Based on the action plan the deliverable 9.16 [2.] was focused on investigations in relation to the ROUTES Task 6 on “Shared solutions for European countries” as this topic obtained a lot of attention from the larger civil society (CS) group. As part of the report, some general issues of good transparency that direct the overall activities in Task 7 are summarised. In addition, some key ethical and legal principles for managing radioactive waste are discussed, that have a general value for all different radioactive waste management situations (predisposal and disposal), including for shared solutions of radioactive waste management (RWM). One chapter discusses public concerns related to shared solutions and underscores the importance of a common safety culture and a level playing field, and how both could be achieved in the context of a proper legal framework. The report describes the outcomes from interactions with the CS larger group and presents results of answers to a questionnaire on such issues. In separate chapters, three cases of shared radioactive waste (RW) solutions in different contexts are presented, describing the issues at stake from a CS perspective in the context of related international conventions (Aarhus and Espoo Conventions, but also adopted EU/EURATOM directives). For two more complex cases, longer versions are provided as appendixes. Based on the descriptions and analyses, conclusions with general recommendations from the case studies and interaction with civil society that could more generally apply for RW shared solutions are provided. One of the most important challenges deriving from all three presented cases is transparency in terms of Nuclear Safety Directive and Waste Directive requirements, which includes two important aspects: i.) Provision of information on the nuclear safety of nuclear installations and management of spent fuel and radioactive waste to workers and the general public and ii.) Provisions of opportunities to participate effectively in the decision-making process regarding the licencing of nuclear installations and spent fuel and radioactive waste management in accordance with national legislation and international obligations. Although many advances could be identified from early years of responsible RWM, after 1990-ies, still lessons can be learned especially if international disposal solution would be implemented.

The focus of the work of ROUTES Task 7 on Interaction with Civil Society (ICS) during year 3 has been investigations on how the pillars of Aarhus convention and a broader understanding of transparency by Civil Society (CS) can be transposed into Radioactive Waste Management (RWM), in particular in establishment of Radioactive Waste (RW) facilities in different national contexts. Therefore, the deliverable D9.17 “Implementation of ROUTES action plan second phase: Transparency in establishment of national radioactive waste facilities: Criteria for good transparency, national case studies and recommendations” [3.] provides the overview of criteria for transparency in the development of national radioactive waste facilities and the results from the applied questionnaire on transparency in the establishment of national RW facilities among ROUTES members and larger CS group. Based on description of nine national case studies addressing current RWM activities in LIMS and SIMS using a harmonised format, the assessment of transparency in different countries with lessons learnt is given. Derived from analyses of national cases on transparency in establishment of national radioactive waste facilities for different European countries: Czech Republic, Denmark, Germany, Greenland, France, Netherland, Slovakia, Sweden and United-Kingdom the recommendations for the transparency and public participation are offered. In general, there is consensus that there are improvements in access to information and opportunities for public participation which occurred mainly due to persistent public and NGOs pressure and change of the government. It is recognised that all WMOs, irrespective of their organisational structure or status as public, private-public, or private entities, are obliged to provide environmental information to the public as defined in the Aarhus Convention and the EU Access to Environmental Information Directive. The fact that this is currently not happening in all Aarhus signatory countries and all EU

Member States is undermining the quality of decision-making around nuclear waste in those countries, and infringes the rights of citizens to be involved in decision making in this important field. Certainly, in an area, where intra- and intergenerational justice is an important issue, full transparency should be guaranteed. The authors would recommend encouraging citizens, in cases where their rights to access to environmental information are infringed upon, to seek national legal remedy, and when that is refused, communicate violations to the European Commission and the Aarhus Convention Compliance Committee

The deliverable D9.18 “Implementation of ROUTES action plan third phase: Short term and long-term public participation in RWM technical topics” is devoted to questions raised during the exchanges with participants and addresses public participation for technical topics in RWM, like the development of WAC, management of challenging wastes and safety case development. The leading question to which the investigation was focused is how to organise and engage the public in these technical topics that might not be so interesting for CS but will still be subject of research and development because of their various uncertainties. Such topics could be also difficult to understand by general civil society as they need a certain level of technical and natural science knowledge. The deliverable starts with discussion on transparency and public participation in relation to RWM implementation and an overview of legal frameworks, the position of regulators as seen by CS experts and an analysis of societal requirements for RWM. The results from a questionnaire applied for the purpose of this study among the participants of ROUTES and the CS larger group is provided with the focus on how public participation is organised for different RWM activities, from development of facilities to smaller technical activities, like preparation of Waste Acceptance Criteria (WAC) or safety report and their upgrades. The case studies for eight countries (Belgium, France, Greenland, Slovakia, Slovenia, Switzerland, Sweden and the United-Kingdom) with a description of public participation in recent RWM activities, including also technical issues where the public was participating and what lessons were learnt is described. Findings on some issues like how to create a pluralistic information environment, how to assure CS participation in technical issues, what role do power relationships play and what is the position of responsible WMOs especially in transparency and public participation are derived from case studies. The report addressed the CS understanding of concrete, short term engagement with different actors, in particular with CS members, (including impacted citizens, and also NGOs), and also looked at the long-term engagement, as a basic agreed condition to be fulfilled for any RWM activity.

## 4.2 Recommendations for future interaction with civil society

Within EURAD the double-wing model has worked in an exemplary manner, but a triple-wing model (Figure 3) might be necessary in the future, because it is difficult to maintain the involvement and interest of CS larger group members in the long term. Therefore, ICS should be maintained and even expanded, which would serve involvement and dissemination.

With regards to transparency and public participation in RWM the recommendations of the BEPPER report are still valid and more relevant than ever. In fact, all the other recommendations could follow from it, and it also comes down to the need to maintain and even expand ICS.

The BEPPER report as described in the previous deliverables<sup>29</sup> can be used as a resource investigating and documenting how effective transparency (i.e., public information and participation) in RWM could manifest itself<sup>30</sup>. In fact, in addition to the Aarhus Convention pillars on access to public information, access to public participation, and access to justice, the BEPPER report sets out a fourth pillar on effective access to resources. This report is also establishing a multi-level system for evaluation of effective transparency in RWM based on those 4 pillars.

<sup>29</sup> D9.15, 1.2 [1.], D9.16, 1.2 [2.], D9.17, 2.3 [3.], D9.18, 2.1 [4.] and D9.19, 2.3.

<sup>30</sup> Broad framework for Effective Public Participation in Environmental decision-making in Radioactive waste management, 2015, <https://www.nuclear-transparency-watch.eu/a-la-une/new-publication-bepper-report.html> .



Further than that, this report discusses the key components (principles, good practices, components on innovation in resources and transparency assessment) of effective transparency needed in RWM which is the first step needed to enhance real interaction with the civil society in the spirit of the Aarhus Convention in order to build a culture of safety based on mutual trust.

On the basis of the work within ROUTES Task 7 and the deliverables D9.16, D9.17 and D9.18, the following recommendations on transparency and public participation in relation to implementation of RWM were extracted and should be included in the future ICS within or outside EURAD.

1. Concerning **transparency and public participation in international organisations**, it can be concluded that access to information and public participation within the EU and related organisational structures is currently guided by the Aarhus Convention and EU legislation. Within international organisations like the IAEA and the OECD-NEA, however, we see that a lot of guidance is given to states by these organisations, but access to information from and public participation within these organisations still defers strongly from the principles of the Aarhus Convention. We note that under the Aarhus Convention art. 3(7), these principles should also be promoted in international settings, and therefore recommend that EU Member States and EU institutions (e.g. the European Commission, ENSREG) use their influence to introduce these principles of transparency and public participation also increasingly within the work of these organisations. This includes unrestricted access to environmental information, including information on or related to emission data, which is currently held in “for authorities use only” databases, but also an increased participation of civil society in the work of these organisations, especially where radioactive waste management is concerned.
2. It is furthermore recommended that international organisations as the **IAEA and OECD-NEA develop their own transparency and public participation policies** based on the principles of the Aarhus Convention.
3. In the **EU Institutions** the principles of the Aarhus Convention have been largely implemented in EU law. There are still ongoing discussions on the access of EU citizens to justice in environmental matters on EU level, but preliminary findings under the Aarhus Convention indicate that these rights will be implemented in the near future.

More specifically in the work of the EU institutions on radioactive waste management, the Aarhus Convention principles have been introduced in Directive 2011/70/Euratom, which not only guide the obligations of Euratom signatory states, but also those of the European institutions.

It is recommended that implementation of these obligations is overseen by the European Commission in conjunction with the Aarhus Convention and the Aarhus implementing EU legislation.

4. Although the Aarhus Convention was ratified by all EU member states, its transposition to national legislation has been found in concrete cases to be still insufficient. Under pressure of renewed interest in the use of nuclear energy, there are furthermore attempts in several members states to “streamline” procedures, which translates into a reduction of the rights of the public as they are formulated under the Aarhus Convention and EU law. As one example out of several, Slovakia, decided to adopt extensive legislative changes that violate provisions of the Aarhus convention and threaten to jeopardise transparency and effective public participation. Because it usually takes years until the Aarhus Convention Compliance Committee (ACCC) issues its findings on issues of non-compliance, and corresponding changes are implemented in the national legislation. This raises the threat that in the meantime, in an environment with reduced standards of transparency and public participation, projects may be approved and cannot be reversed later. For that reason, it is recommended to adopt measures to shorten the time the ACCC to investigate issues of non-compliance and provide additional assistance for the public and NGOs in raising non-compliance objections.

5. It is also recommended that Member States implement their obligations under the Euratom Treaty Directives (e.g. 2011/70/Euratom) on the basis of the Aarhus Convention and EU implementing legislation, and that the European Commission in its review of compliance with the transparency obligations under Euratom Treaty Directives (e.g. 2011/70/Euratom art. 10), assesses the practice of Member States in conjunction with the Aarhus Convention and EU implementing legislation.
6. The investigations within Task 7 also noted that the effectiveness of public participation is limited due to problems in access to (complete and objective) information and its verification, information asymmetry, short procedural deadlines, insufficient financial resources and personal capacities of the citizens and NGOs. As an example, it is de facto impossible for the public to get familiar with RWM related documentation consisting of hundreds or even thousands of pages in detail if it can be accessed only via physical inspection of printed files and this information is not available online. Also examples of commenting periods of only a few weeks or days were observed. Providing easy and fast access to searchable electronic documentation from administrative procedures could significantly improve public participation effectiveness. Under the obligations of the Aarhus Convention and the related EU legislation, as much information and documentation should be made available online automatically and not only on request. It is also recommended to extend deadlines proportionally to the documentation volume and assure that commenting procedures do not take place during holidays. It is also recommended that relevant public entities (experts, NGOs, active citizens) are actively sought and encouraged to participate from an early stage of drafting national strategies, policies and similar documents on all levels, that is on the level of the EU / Euratom by the European Institutions, on the national level as well as on a local level. The conditions should take into account the specifics and limitations of public participation, so that all interested active citizens can effectively participate.
7. The status of certain nuclear-related institutions, like WMOs and state-owned utilities towards their obligations under the Aarhus Convention and EU transparency law should be clarified on the basis of the existing jurisprudence under the Aarhus Convention. In line with this, we recommend that clear regulation is put into place that fulfils the obligations under Aarhus for all institutions that are providing public services under the oversight of a public authority. We note that all WMOs are falling into that category, and we recommend that WMOs therefore align their transparency policies, including access to information and public participation, with their national nuclear regulators.
8. Public participation currently often takes place only in cases when an EIA process is required in order to issue a permit decided by a responsible authority and therefore mainly limited to a once in a lifetime action for any RWM facility, like, e.g., a siting licence or siting together with a construction licence.

Other legal authorisations (e.g., operation licences, 10-year periodic safety reviews, licences for individual safety related activities, also licences for closure) do not always provide options for public participation, even though they are required to do so<sup>31</sup>. In order to improve the quality of decisions, and prevent lengthy appeal procedures, we recommend that these obligations are always fully implemented. We also recommend more attention to the implementation of other obligations under Aarhus, like art. 5(6) (operators are encouraged to inform the public regularly) and art. 6(5) (encouragement of prospective applicants to enter into discussion with and provide information to the public concerned before applying for a permit).

9. On the basis of the overview of country case legislation in D9.19, we saw that transparency and public participation **responsible authorities** currently in many cases (as also illustrated in the

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<sup>31</sup> See for instance the [general findings of the Aarhus Convention Compliance Committee for the 7<sup>th</sup> Meeting of Parties of the Convention in 2021](#), par. 63-64 on Periodic Safety Reviews

country cases) primarily deal with concerns and the point of view of project operators and promoters. It is recommended, however, that these authorities **see themselves in issues of transparency and public participation rather as representatives of the general public (citizens)** and oversee that transparency and public participation obligations are implemented from the point of view of the rights and needs of interested citizens, rather than the restrictions preferably seen by operators and project promoters. This facilitates an environment in which the voice of civil society gains strength and can help improving the quality of final decisions – not only from the respective authority, but also project operators and promoters. This further results in an overall gain of confidence in decision processes and credibility, not only of independent authorities, but also project operators and promoters, that in the end also fulfil a public service. This study refers in paragraph 2.4 to work carried out in D9.18 that an assessment of **what interaction between science and citizens leads to fruitful interactions**. We recommended that the different criteria for fruitful interaction are operated in any environment of transparency and public participation.

10. From the assessment of the questionnaires carried out in D9.18, it could be concluded that **continuity in citizens engagement** is, especially where the issues become more technical, a challenge. To address this, it is recommended to think in an early stage how forms of “rolling stewardship”<sup>32</sup> can enable long-term engagement and continuity.
11. Although formal processes like SEAs or EIAs do trigger citizens engagement, the country case studies in publication D9.18 revealed clearly that progress in development of radioactive waste research and policy implementation, especially citizens involvement in more technical issues, is strongly supported by more structural public participation. For this participation to be sufficiently in-depth and continuous, it is recommended to use **long lasting self-governing structural frameworks** like local information committees, NGO secretariats or similar civil society clearing houses, beyond the participation of democratic representative bodies (e.g. municipal councils). Involvement of already existing self-governed civil society entities like NGOs furthermore enhances the depth in which participation can go in more technical issues as well as the level of continuity. It must, however, also be concluded that there is a large need to provide such institutional structures with sufficient financial means to provide continuity.
12. Long-term continuity of civil society engagement appears to be especially challenging during facility operation, closure and post-closure. Work within the UMAN seminars have revealed that some form of **structural long-term stewardship** is needed to secure the needed public engagement for these long periods. It is recommended to develop, operate and test such forms of participation already in the earlier stages of research and development of final disposal and management.
13. Finally, access to information is not sufficient and should be part of the raising awareness process (technical training, bringing response to all questions of civil society) which needs time. In fact, raising skills also implies the necessity to accompany technical experts to dialogue with society as dialoguing with society is not innate for technical experts, it can be a though exercise, for which they would need support from CS experts inside their own structure and/or independent CS experts.

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<sup>32</sup> Which could be defined as an “*intergenerational management concept requiring monitoring and maintenance of the RW for an indefinite period of time*” as in the deliverable D9.18, p.64 [4.].

## 5. Dissemination of the results

CS experts in Task 7 have developed the following deliverables during the 5-year duration of EURAD between 2019 and 2024 labelled as D9.15 (Scoping of ROUTES, initial CS input and ICS action plan) [1.], D9.16 (Implementation of the ROUTES ICS action plan first phase) [2.], D9.17 (Implementation of ROUTES action plan second phase) [3.], D9.18 (Implementation of ROUTES action plan third phase)<sup>33</sup> [4.] and D9.19 (Synthesis of Task 7 activities).

It is also important to recall the involvement of the civil society experts of task 7 in various workshops and events meant to disseminate and deepen the results obtained. The ROUTES results were presented during 6 Interaction with Civil Society (ICS) workshops between 2019 and 2024: online, Fontenay-aux-Roses (France), Fontainebleau (France), Brussels (Belgium) and Ljubljana (Slovenia).

After the kick-off meeting held in Paris (September 17, 2019), the CS experts attended the workshops held in Athens (March 2<sup>nd</sup>-7<sup>th</sup>, 2020) where an opportunity to better apprehend and scope the technical activities performed in ROUTES was given. A half-day meeting was devoted to the presentation of the Task 7 activities and to the interaction with the other tasks. A “serious game” PEP – Pathway Evaluation Process, developed in the framework of the SITEX II Project has been presented there and it was agreed that some PEP Sessions will be organised in later ROUTES or EURAD meetings<sup>34</sup>. A specific ICS workshop (MS82) was also held in May 2020 on the deliverable D9.15.

A detailed “ROUTES Task 7 action plan for year 2 to 4 for interaction with civil society (ICS)” was developed in September 2020 and distributed to all tasks co-leaders in ROUTES. Then interactions and dissemination with other ROUTES task took place like during the task 6.3 WS, where Task 7 gave a presentation about ethics for RWM shared solutions and presented 3 case studies. These are presented also in Deliverable n° 9.16 [2.]. As recalled in the deliverable D9.14 from task 6, the *“first and foremost objective is to achieve a level playing field for the collaborators. This is to prevent the development and localisation of shared facilities towards countries with the lowest environmental and social standards”*.

Among many others, civil society experts from ROUTES’ task 7, participated to the following events:

- ROUTES WPM1 “Kick-off” meeting (16/09/2019) in Fontenay-aux-Roses (France).
- EURAD 1<sup>st</sup> annual event (16-18/03/2021) online.
- ROUTES Subtask 4.2 workshop (14-15/06/2021) online: presentation and discussion of cross-cutting topic “The involvement of stakeholders in the development and application of WAC”.
- ROUTES WPM2 (20/09/2021) online.
- International Conference on RWM (IAEA – November 2021)<sup>35</sup>.
- EURAD 2nd annual event (28-30/03/2022) in Fontenay-aux-Roses (France).
- EURADWASTE’22 (31/05 – 02/06/2022) in Lyon (France).
- ROUTES WPM3 + Subtask 6.3 workshop (21-23/06/2022) in Cherbourg (France): involvement in the PEP serious game and presentation of the deliverable D9.16 [2.].
- ROUTES WPM4 (05/12/2022) online.
- EURAD 3rd annual event (14-16/03/2023) in Larnaca (Cyprus).
- ROUTES 1<sup>ST</sup> Workshop: SIMS and LIMS Interaction (02-04/05/2023) in Vienna and Siebersdorf (Austria): participation and presentation on effective ICS in SIMS and LIMS.
- ROUTES WPM5 (12-13/09/2023) in Middelburg (Netherlands): presentation of the outcomes and content from the task 7 deliverables [1.], [2.], [3.] and [4.].

<sup>33</sup> To be published.

<sup>34</sup> See EURAD 1st periodic report from 01/06/2019 to 31/05/2020 (part B), p.80.

<sup>35</sup> EURAD \_ IPR3\_June-2021 to Nov-2021, p.6.



- International Conference on Environmental Remediation and Radioactive Waste Management (03-06/10/2023) in Stuttgart (Germany): presentation of the paper “*Transparency in establishment of national radioactive waste facilities - criteria, cases, recommendations*” [6].
- International Conference on the Safety of Radioactive Waste Management, Decommissioning, Environmental Protection and Remediation: Ensuring Safety and Enabling Sustainability (6-10/11/2023) in Vienna (Austria): presentation of the poster “*Possibilities and Challenges of RWM with Regard to Civil Society Interactions*” [7].
- 2<sup>nd</sup> workshop on SIMS and LIMS interaction (28-30/11/2023) in Lisbon (Portugal): task 7 gave a presentation of the paper “*Transparency in establishment of national radioactive waste facilities - criteria, cases, recommendations*” [6].
- WM24 Conference (USA in March 2024) Future European Collaboration on Radioactive Waste– “Results from the EURAD Routes Work Package - Towards Waste Management”.
- EURAD 4th annual event (23-25/04/2024) in Bucharest (Romania).

An Aarhus Convention and Nuclear Round Table on Radioactive Waste Management<sup>36</sup> was held in between 13-15 January 2021 by Nuclear Transparency Watch (NTW) and the DG ENER (European Commission). During this seminar, in between a session on the “Implementation of the information and public participation provisions of the Radioactive Waste Directive (2011/70/Euratom)” and a session on the recent developments in civil society access to expertise and research<sup>37</sup>, the following national cases were discussed involving representatives from a variety of actors:

- Germany: BASE, BGE and NBG;
- United-Kingdom: Stakeholder Engagement in siting team of RWM and representative of NDA, Cumbria Trust;
- France: French Ministry of Sustainable Development, IRSN, ANCCLI;
- Czech-Republic: Platform against deep underground repository, SURAO;
- Sweden: Legal expert for the Swedish Council for Nuclear Waste, Swedish Radiation Safety Authority (SSM), MKG.

In 2023, a webinar series was also developed along the year, in the frame of Nuclear Transparency Watch (NTW)<sup>38</sup>, in order to disseminate and deepen the results from the deliverable D9.17 [3.] on various national cases (Sweden, Denmark, France, United-Kingdom, the Netherlands, Greenland, Slovakia, Germany and Czech Republic).

Finally, a Training on Safety Case development took place in Prague – EURAD course (28-02/12/2022) with a presentation of the PEP<sup>39</sup>.

To improve the dissemination of EURAD's work results, a straightforward step would be to open parts of the EURAD annual event to the public. Moreover, enabling participants to attend various events online within EURAD would greatly enhance interaction and engagement. This first-hand experience would undoubtedly benefit the broader community and foster more meaningful interactions.

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<sup>36</sup> <https://www.youtube.com/watch?v=qN6mQ8aFq0I&list=PL8iBc389W3s4fh1tozM-4RBtvGBZaBaPf&index=1>

<sup>37</sup> In those sessions some actors from EURAD were speakers such as Ms Louise Théodon, ANDRA, EURAD coordinator, Mr Valéry Detilleux, Bel V, Ms Anne Bergmans, University of Antwerp or Mr Gilles Hériard-Dubreuil, Mutadis.

<sup>38</sup> <https://www.youtube.com/playlist?list=PL8iBc389W3s7ENXEvmAhO-49ewE6FPzC9>

<sup>39</sup> [https://euradschool.eu/wp-content/uploads/2022/10/Preliminary-programme\\_EURAD-Training-course-on-Safety-case-development-and-review.pdf](https://euradschool.eu/wp-content/uploads/2022/10/Preliminary-programme_EURAD-Training-course-on-Safety-case-development-and-review.pdf)

## 6. Feedback from EURAD

Many interactions took place with Task 7 activities and therefore feedback was collected.

### 6.1 Feedback and recommendations from other ROUTES Tasks

The different members who have been interacting with ROUTES' task 7 were asked to give feedback of their experience (e.g., things learnt) and recommendations (e.g., ways to disseminate and popularize) on the results observed.

The task leaders from ROUTES (task 2 to task 8) have provided the following feedback after an email was sent to them asking to answer the following question *“What is your experience (e.g., things learnt) and recommendations (e.g., ways to disseminate and popularize) on the results?”*<sup>40</sup> :

- *“A lesson learned found for future strategic studies is that “it is desirable to avoid constraining the involvement of partners only to specific tasks or subtasks. It is preferable to establish such studies in a way that allows flexible and cross-cutting inputs. Knowledge exchange and collaboration between partners is particularly important in strategic studies”. Apparently, this point was captured also in the EURAD Lessons Learned exercise”.*
- *“Integration of CS experts and representatives of the wider CS group into each of the technical tasks of ROUTES was really successful for ensuring that:*
- *Societal factors were brought into discussions on technical requirements and expectations (e.g., concerning whether WAC have a role in building confidence in the implementation of disposal routes, and whether that should influence the approach to define WAC).*
- *Civil society partners are aware of the challenges that WMOs are grappling with at a given time.*
- *This was found to be “a much better model of integrated working / sharing than is achieved by only performing CS work in a discreet task(s)”.*
- *“The interaction with CS representatives has been an asset for the work done in ROUTES”. The CS members/representatives “provided the view of the informed public on the topics discussed and shared valuable insight in their country’s activities and the associated communication of the activities to the general public. Of significance were the best practice examples on public participation and information activities. The involvement of CS representatives, and not only the dissemination of results, should continue in future strategic studies.”*
- *“It is very hard to answer that question (...) personally, I have found CS exchanges interesting and the examples from other countries very eye opening. However, handling this communication/education/input from civil society/general public varies a lot from a one country to another. Even though examples have been great, I do not know how easy it would be to transfer approaches from one country to another”.*
- *“About the ways to popularize the results (if this means translating technical/scientific results understandable to non-scientific community), I (...) think that the good way is what is used in Finland and also somewhat here, that the experts themselves communicate this, and they do need to learn to adapt their message depending on the audience. Dissemination of technical/scientific matters is best done in technical/scientific community, but again this need to be explained to the general public in a way that is understandable to them”.*

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<sup>40</sup> References and links to the ROUTES task 7 deliverables were provided in that email.

- *“Routes WP presented the great advantage that much of the work and discussions were based on case studies and practical feedback experiences from various partners. This approach enables to target effective needs and define and support relevant R&D recommendations at EU level. It also provides an opportunity for operational discussions on practices that subsequently could be implanted by other partners. In terms of things learnt, ROUTES Task 2 provides a clear picture of what is at stake in terms of management of challenging waste and the related difficulties. This is how the recommendation raised within this project are all the more valid and meaningful. In terms of recommendations, for future strategic studies, it is necessary to encourage working through practical case studies and exchanges of feedback experiences & good practices. This clearly helps to catch common challenges and the needs to implement in order to cope them”.*

## 6.2 Feedback and recommendations from Knowledge Management

The interactions with the Knowledge Management and the ROUTES task 7 were rather limited, the most significant interaction took place in order to prepare the Lessons learnt from EURAD Interaction with Civil Society (ICS) activities regarding Knowledge Management which were presented during a lunch-and-learn in November 2022<sup>41</sup> and then disseminated on EURAD website.

## 6.3 Feedback and recommendations from EURAD civil society members

The different CS members/experts both from CSLG and CS experts groups have provided the following feedback after an email was sent to them asking to answer the following question *“What is your experience (e.g., things learnt) and recommendations (e.g., ways to disseminate and popularize) on the results?”*<sup>42</sup> :

- *“The larger CS group was an important vehicle to disseminate and popularise the ROUTES result. After closure of EURAD, this should be continued to spread the results and deliverables from the different working groups within interested civil society partners”.*
- *“The CS group also is an important vehicle to communicate viewpoints from civil society to different ROUTES working groups. It is important that a similar mechanism will continue under EURAD-2”.*
- *“I would say that having very different actors including CS was one of the major benefits of the ROUTES which enable technical experts to exchange with CS experts and to discuss different issues. Also, new tools such as PEP tool and broader technic using scenarios as bases and frame discussion around scenarios provided good means to discuss different position and even harmonize the views”.*
- *“For further popularisation of ROUTES results: it really depends on the stakeholders’ group and should be elaborated for each group separately. Obviously, the experts expect very precise information and new agreed approaches, while public have a broader view and less details”.*
- *Civil society involvement/interactions “is crucial to the functioning of EURAD, but that it should be further developed - e.g., the double wing model could be replaced by a triple-wing model - and that more resources should have been provided” for the civil society interactions in EURAD.*
- *“During the ICS workshop, the opportunity was given to have presentations of different national cases studied in ROUTES”, it helped a lot in improving knowledge about the different national*

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<sup>41</sup><https://www.ejp-eurad.eu/events/lunch-and-learn-session-lessons-learnt-eurad-ics-activities-regarding-knowledge-management>

<sup>42</sup> References and links to the ROUTES task 7 deliverables were provided in that email.

*situations and to do comparison. In addition, the multi-stakeholders' discussions also helped "to provide recommendations for routes waste with an international perspective (on legal framework for instance)" and "at national level (good practices regarding transparency and public participation that could be reproduced in different contexts)".*

- *"I learnt from the Routes project that it is very helpful to build up and sustain a community of interactions experts-civil society in order to deal with the uncertainties and the complexities of the socio-technical processes in RWM".*
- *"I recommend for the sake of the ROUTES' outcomes dissemination to elaborate a short document (e.g.: executive summary) with several online references to the correlative ROUTES (and EURAD) reports and to circulate it at several levels (e.g.: for the civil society audience)".*
- *"Through the involvement of civil society in EURAD the non-CS (technical) experts who participate in EURAD had the opportunity to be informed by the CS members about another (and often very different) perspective/opinions (based on evidence) about situation in RWM in other countries. Without CS these technical experts are exposed almost exclusively to information provided by operators, WMOs, regulators, etc. which is often non-objective, incomplete or misleading. Unlike operators, WMOs, regulators, etc. the CS has extremely limited opportunities to effectively inform other relevant actors, so EURAD helped a little bit to reduce this asymmetry."*

## 7. Conclusions

The interaction with civil society in ROUTES was organised in Task 7, which is composed of CS experts working on topics of interest, investigated in other tasks. The Task 7 members are divided in teams who follow the activities in other tasks and contribute to the deliverables through webinars, and workshops and by commenting the results obtained the other tasks. In addition, the CS larger group has been involved in workshops discussing the results and obtaining feedback on proposed Task 7 drafts.

In total, Task 7 members authored five deliverables, which all focused on transparency and public participation in RWM through different lenses: first developed the methodology<sup>43</sup> and scoping the tasks, and one deliverable devoted to shared RWM solutions, conditions for governance and issues of transparency and public participation; one dedicated to transparency in establishment of national radioactive waste facilities with proposals for criteria, and with practical cases and recommendations; and one addressing issues of transparency in the technical topics and long term governance of RWM.

The Task 7 team also contributed to the recommendations<sup>44</sup> for future activities aimed at translating scientific and technical findings on effective interaction with civil society and highlighting the need for a strong implementation of the Aarhus Convention and maintenance of safety culture over multiple generations. In fact, those recommendations, listed in this deliverable (4.2), are suggesting various improvements for T&PP starting with propositions for international organisations like IAEA and OECD-NEA or for EU member states in compliance with the Aarhus Convention Compliance Committee (ACCC) and the legislation (Euratom Treaty Directives [8.], [9.], [10.], [11.], [12.], [13.]). More specifically, some recommendations are given for regulators and authorities with concerns for the continuity of a sustaining and even improving CS engagement in the long-term in terms of skills and awareness.

The dissemination of the results has been widespread and diverse, including presentations at conferences and other events, organisation of webinars and inclusion of topics in round tables with, among others, the European Commission.

The interaction with civil society in ROUTES, demonstrated that such an approach is effective and serves several purposes: the CS experts can define their own methods and ways of working, which are then agreed upon with all ROUTES board members; the interactions with activities in the other tasks in ROUTES are productive and sufficiently detailed; thus, the overall contributions from Task 7 in events and analyses are well received. CS involvement in ROUTES is recognised also by other ROUTES members and broader as successful approach with big added value.

To sum up, the way that topics have been addressed in ROUTES by inclusion of CS could have a broader appeal and travel beyond EURAD, potentially serving as a model for transparency and public participation in other large-scale research projects, both within the EU and globally.

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<sup>43</sup> The methodology developed for the Task 7 is developed in chapter 3 with a description of the double wing model (3.1) and how it could evolve towards a triple wing model (3.2) enabling a broader and enhance participation from the CS.

<sup>44</sup> EURAD Deliverable 9.3 – ROUTES - Recommendations for R&D, strategic study and KM activities for future European collaboration, in preparation



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