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# D9.92 Knowledge base for designing and documenting stakeholder engagement process

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## Abstract

The ENGAGE project, funded under the H2020 CONCERT, aims at *ENhancing stAkeholder participation in the GovernancE of radiological risks*. This two-year project started on November 20<sup>th</sup> 2017, and seeks to identify and address key challenges and opportunities for stakeholder engagement in relation to medical use of ionising radiation; post-accident exposures; and exposure to indoor radon. In all these situations, stakeholder engagement is a key issue for improving the governance of radiological risks and the radiological protection of the exposed individuals.

Within this project, a dedicated task of Work Package 4 (WP4.2) examined the possibility to elaborate a knowledge base structure for documenting stakeholder and public engagement in radiation protection, covering three exposure situations: medical, indoor radon, and emergency and post-accident.

The main objective of this report is to propose a design concept for a knowledge base which can contribute to learning from past experience, highlighting challenges and opportunities for stakeholder engagement, and thus helping to shape and improve future processes. This will allow comparing and contrasting participation processes in the three aforementioned exposure situations.

The concept builds on the knowledge base concept developed by NERIS platform partners in relation to nuclear or radiological emergency and post-accident recovery. This concept was revised and extended to take benefit of the results of WP1-WP3 of the ENGAGE project. In particular, the fields addressed are extended to indoor radon exposure and medical exposures to ionising radiation. Additionally, actions to develop radiation protection culture are also included, from the perspective that this facilitates stakeholder engagement in radiation protection. The database structure includes seven sections for which the information about the event/practice/ process should be collected (who, what, why, when and how).

Case studies based on the results of WP2-WP3 on practical experiences of stakeholder engagement in radiological protection issues are included in Appendix, to illustrate the feasibility of the proposed knowledge base structure.

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## 2 Overview of Task 4.2 - Knowledge base

### 2.1 Content and structure of this report

The report presents the *knowledge base development background* focusing on the structure developed and tested under the NERIS Platform and the OECD pilot database structure, presenting concrete examples of stakeholder engagement in regulatory policy from OECD members and partner countries.

*Instruments and tools for stakeholder engagement* are discussed taking into account the specific context of three exposure situations: medical, indoor radon and post-accident.

*The approach for documenting stakeholder engagement* is further analysed based on the knowledge acquired within WP1, WP2 and WP3, allowing comparing and contrasting stakeholder engagement processes in the three aforementioned exposure situations.

The *concept of a joint knowledge base on stakeholder engagement* in radiation protection is presented, and the structure of the knowledge base is further detailed, through providing brief explanations and examples of each of its constituent elements.

The final chapter of the report provides suggestions for further steps to move from *the concept to the implementation of the knowledge base*.

Appendices contain the NERIS and OECD database structures and give particular examples of how to document the revised knowledge base with case studies developed under the ENGAGE project. These examples illustrate the layout and understanding of particular knowledge base elements, and form the basis for its further development.

### 2.2 Knowledge base and objectives of Task 4.2

The stronger requirements for, and recognition of, stakeholder involvement in radiation protection, on the one hand, and the remaining challenges in translating these expectations into practice, on the other hand, substantiate the need for knowledge sharing through a repository of stakeholder engagement experiences.

First steps in this direction have already been done by NERIS, which is the European platform on preparedness for nuclear and radiological emergency response and recovery. NERIS has proposed a database concept for recording experience in the use of stakeholder workshops and other forms of public and stakeholder engagement in emergency response and recovery within last decades.

The main objective of ENGAGE Task 4.2 was to examine existing databases for stakeholder engagement and, combining this past experience with the attention points of the ENGAGE project, design a knowledge base, exemplified with case studies through building on past experience, and thus highlighting challenges, opportunities, and best practices for stakeholder engagement future processes are improved. While the scope of the database is primarily directed at the three exposure contexts addressed by ENGAGE, it should also fit to all other exposure situations.

The importance of such a knowledge base is reflected for instance by the strategic research agendas (SRA) of the NERIS and SHARE platforms developed or updated under the CONCERT project WP2, which highlighted stakeholder engagement as an area where further research and development is needed.

The SRA of the **NERIS Platform** (NERIS, 2017) addresses in its Key topic 8 “Stakeholder engagement, involvement of the public & communication: Stakeholder and public engagement processes”. Among others, this entails topics related to a stakeholder engagement database, evaluation of legal instruments and governance frameworks, methods and tools for stakeholder engagement; for these topics further research and development was deemed necessary.

The **SSH SRA** (Perko et al, 2019) also states in their research line 4 that research is needed on “Stakeholder engagement in radiation protection research and development, policy and practice”. Relevant topics include the *establishment of a collaborative framework for stakeholder engagement in radiation protection research, policy and practice*; the *Assessment and development of stakeholder and public participation tools and methodologies for different radiological exposure situations, including roles, rules and responsibilities of stakeholders in the engagement process, motivations, values and links between theory and practice*; and the *Preservation of knowledge and experience of local stakeholders’ involvement and participation*. Research on these topics, alongside others mentioned in the SHARE SRA, is expected to “promote responsible RP practices and [bring] benefits for both science and society”.

### 2.3 Working Methodology

The research methodology of the ENGAGE project offers the foundations for the development of the knowledge base concept under the WP4 Task 4.2. Within ENGAGE, specific attention was given to the conceptualisation of stakeholders and stakeholder engagement; the rationales for, and expectations from, participatory processes; the level of engagement (e.g. with respect to the impact on policy-making); the participatory methods (e.g. workshops, focus groups, surveys, panels and other); and with consideration of both institutional and non-institutional forms of participation.

The ENGAGE project could also greatly benefit from existing initiatives regarding the development of knowledge bases. With respect to EP&R, processes and different forms of stakeholder engagement have been identified and documented already under the NERIS Platform and other projects in the area of emergency preparedness, response and recovery. This led to the development of a proposal for building a knowledge base reporting on stakeholder workshops and public participation (French et al, 2014).

Another example is the OECD Pilot database on stakeholder engagement practices, which provides information and concrete examples of stakeholder engagement in regulatory policies from OECD member and partner countries. This gives a general perspective on how such knowledge could be collected and documented for further use (OECD).

Building on this and other experience, Task 4.2 aims at supporting the development of a joint knowledge base for stakeholder engagement in Radiation Protection.

The work has started with a reflection on the knowledge base structure for documenting stakeholder and public engagement processes run by NERIS platform partners for emergency and post-accident recovery. Particular attention was directed at which adaptations needed to be made in order to extend the scope of the NERIS’ knowledge base structure. This reflection aimed at identifying how this database can be extended or amended in order to include the key research questions addressed in the ENGAGE project.

Round tables discussions with radiation protection researchers and practitioners at the NERIS 2018 workshop, formed the basis for further reflection.

Within ENGAGE WP2 and WP3, participatory practices and approaches to develop radiation protection culture in the field of emergency preparedness and response were compared and contrasted with similar approaches developed for medical and indoor radon issues.

The aforementioned reflections and assessments form the basis of the revised knowledge base concept, which includes and takes benefit of the results from WP1, WP2 and WP3 of the ENGAGE project.

### 3 Knowledge base structure development background

Over two decades of experience in the use of different forms of stakeholder engagement in emergency preparedness, response and recovery led the NERIS platform to develop a proposal for building a knowledge base which reports on stakeholder engagement in radiation protection, and which collects information on workshops, and public participation conducted under NERIS and other related projects. Some organisations, for instance OECD, have also made efforts to document exemplary cases of stakeholder engagement practices in regulatory policy. Experience from practices that have previously been undocumented because they were not 'officially' part of radiation protection has also been considered in this process.

ENGAGE builds on the existing databases and broadens these conceptually and domain-wise. The aim was to provide a medium that can record various forms of participation. This is expected to contribute to sharing experience associated to such interactions in order to stimulate mutual learning and gradually identify good practices (French et al, 2014).

#### 3.1 Knowledge base of the NERIS Platform

Based on past experience and the NERIS related EURATOM project results, a report has been developed under the NERIS working group on Emergency Preparedness and Stakeholder Participation (French et al, 2014). This report proposed a structure for documenting stakeholder and public engagement processes run by NERIS partners in relation to nuclear or radiological emergency and post-accident recovery. The aim was to build a knowledge base providing a repository of experiences that allow identifying and assessing good practice, thus helping to shape and improve future processes. The conceptual structure of the knowledge base has been developed with a view that any event which involves interaction with stakeholders or the public might be entered into the knowledge base using this structure.

It was envisaged that in reporting each exercise, activity or event **four classes of information** and material will be uploaded:

- Basic factual information;
- General description;
- Evaluation according to several criteria;
- Other relevant documents and material uploaded as files.

The generic term *exercise* is used to represent any form of institutional led stakeholder workshop, participatory event or interaction.

Appendix 1 includes the NERIS database structure, explaining the aforementioned classes of information in greater detail, including particular items/elements and examples.

In short, *Factual information* contains the numbers of participants, stakeholders involved and how they were selected, how long it took to arrange the meeting or activity, where it was held and what facility was used etc., so that when one comes to design such kind of event, this information can be uses.

*General description* contains a broad, freeform description of the event broken down under several general headings to enable the reporting.

*Evaluation* of event against criteria provides qualitative responses so that the leader of event together with some or all participants records impressions supported by any more empirical evidence that is available.

*Other relevant documents* are intended as a repository for documents and reports relating to the event.

While the NERIS database contains a comprehensive description of the participation practice, with a dual pragmatic and normative viewpoint, it pays less attention to the rationale for engagement or the link to possible prescriptions. Its framing also suggests a focus on institutional approaches, namely stakeholder engagement activities initiated by radiation safety authorities or radiation protection researchers. It also does not account for the different levels of involvement.

### 3.2 Knowledge base of the OECD

A pilot database has been developed by OECD to illustrate stakeholder engagement in regulatory policy in OECD member and partner countries. It focuses on the implementation of the 2012 Recommendation of the Council on Regulatory Policy and Governance in practice.

The OECD database includes information and lessons learned on stakeholder engagement practices in different areas, at various stages in the policy cycle and using diverse models and methods of stakeholder engagement. The information in the database is collected according to the structure given below:

- Provider of information
- Overview of the practice
- Main actors involved in the practice
- Stakeholders involvement
- Development and implementation
- Outputs and evaluation of the practice
- Additional comments and information
- Crosslinks to OECD principles and databases
- Sources.

Overall, the database focuses on consultation as a form of engagement and it is meant for public authorities wishing to set up consultation processes for specific policies.

### 3.3 ENGAGE knowledge base for stakeholder engagement in radiation protection

The work carried out under ENGAGE allowed to better understand *why*, *when* and *how* stakeholders are engaged in radiation protection.

While there is broad awareness and recognition in the radiation protection community of the importance of stakeholder engagement, there are challenges for implementing this into practice. The main objective of the work presented in this report was drafting a concept of knowledge base that would contribute to learning from experiences, highlighting challenges and opportunities for stakeholder engagement and thus helping to shape and improve future processes.

The ENGAGE knowledge base concept aims at documenting a wider range of participatory practices, taking into account the specific context of three radiation exposure situations: medical, indoor radon and emergency/post-accident. It takes stock of the NERIS and OECD databases, highlighting the key elements addressed by the ENGAGE project.

Participation processes, including actions for the development of radiation protection culture, studied in the ENGAGE WP2 and WP3 case studies vary depending on the specific context of the exposure situations. The approach for documenting stakeholder engagement in different exposure situations is based on case studies performed within WP2 (C. Pözl-Viol et al, 2018) where analyses have been driven by the following questions:

- *How are radiation protection communities responding to “external” pressures, mandates, demands, and/or expectations emerged in public venues commending the engagement of stakeholder and how does this show in practice (e.g. specific cases)?*
- *Which (other) real or potential forms and instruments of stakeholder engagement and public participation can be observed in RP practice, showing no reference to existing requirements?*

Responses to these questions have been fed into a broader, more normative, debate within and beyond ENGAGE on where the challenges and opportunities lie for stakeholder engagement in radiation protection, and how to build a more robust and participatory radiation protection culture (WP3) (C. Pözl-Viol et al, 2018; Schieber et al, 2019).

The research methodology is described in:

- D9.85 “Rationales and frameworks for stakeholder engagement in radiation protection in the medical field, nuclear emergency and recovery preparedness and response and indoor radon exposure”. The investigation of rationales and frameworks for stakeholder was based on data collected through document analysis and interviews. The aim was to investigate what “external” pressures, mandates, demands, and/or expectations have emerged in public venues commending the engagement of stakeholders (including wider publics) in radiation protection. Key elements of analysis included:
  - motivations for participation: instrumental (to secure an end point), normative (responding to a certain principle), and substantive (to achieve better decisions) ;
  - level of participation: considering e.g. the influence on decisions, the purpose of participation, the interactions between stakeholders;
  - frames used to define / recommend engagement: assess how prescriptions explicitly or implicitly convey a problem definition, moral evaluation, and treatment recommendation;
  - stakeholders: who is involved and/or have interest in interaction in radiation protection, either from legal framework perspective or based on expectations and adopted norms in different fields.
- D9.82 “Report on key challenges, best practices and recommendations for stakeholder engagement”, including the methodology for case study of participation practices. Data were collected through document analysis and interviews. Case studies were analysed and reported using a common template. The aim was to identify i) if and how the requirements are put into practice; ii) what can be observed in practice and if this is derived from the requirements or not; and iii) if there is an obvious link between prescription and practice. In order to operationalise these overarching questions, these were further explicated in the following derived questions (adapted to the case studies and used when relevant):

- What levels of awareness about external prescriptions of stakeholder engagement in radiation protection do researchers and practitioners reveal?
- How do researchers and practitioners understand and practice stakeholder engagement (at individual and institutional level)?
- What were the rationales for stakeholder engagement, the final objectives? Has there been a critical evaluation of the attainment of objectives and of the impact of stakeholder engagement? Have there been any guided improvement activities?
- What forms of acceptance, resistance, denial, or alteration of engagement do you observe or encounter? And how do these forms change over time?
- What are radiation protection actors and communities doing that may *de facto* count as stakeholder engagement (but are not necessarily labelled that way)?
- Are there any alignments/misalignments between case practice, on the one hand, and external conceptions and prescriptions, on the other, and if so why? Which challenges and opportunities do you encounter for stakeholder engagement in your specific case?
- What else have you found or should we be asking?
- What are the outcomes of implementing stakeholder engagement processes (in the situation studied)?
- What are the lessons learned for the establishment of efficient stakeholder engagement processes?
- Deliverable D9.83 “Preliminary report on case studies: Development of radiological protection culture to support the governance of radiological risk”. An analysis grid has been developed for the **case studies on radiation protection culture**. Case studies in each field have been analysed by the Project partners following this grid, based on their feed-back from their practical experience in the actions / processes described. Interviews of some key actors of the actions have sometimes been used to complete the analysis. The analysis grid included the following elements:
  - **Characterisation of case study including type of actions, processes:** *description of the actions/processes that will be studied and analysed from the point of view of RP culture dissemination processes.*
  - **Characterization of RP culture (elements / definition):** *elaborate around the “definition” of RP culture and its characterization according to the exposure situation, in order to identify aspects that can influence RP culture such as organisational, societal, ethical or economical aspects.*
  - **Development of tools, methods & processes to build, enhance and transmit RP culture:** *description and analysis of the RP culture dissemination process. It should help to identify the elements of RP culture, the dissemination process, its specificities according to the target stakeholders. This examined also the efficiency of the processes as dissemination of RP culture and how it may have influence the practices, understandings, behaviours... of the target stakeholders regarding RP. Finally, the question of the sustainability or dynamic of the process was also investigated.*
  - **Evaluation of the level of RP culture:** *evaluation of the efficiency of RP culture and its dissemination process*
  - **Highlighting the role of RP culture:** *the role and the potential benefit of building and enhancing radiation protection culture for supporting effective stakeholder engagement and informed decision-making in relation to radiation protection at the individual and collective level.*
  - **Connection with the European RP research programme:** *links with the RP research platforms as well as the RP research roadmaps, highlighting lessons learned and recommendations.*

## 4 ENGAGE knowledge base on stakeholder engagement: concept

The development of the knowledge base documenting stakeholder engagement processes based on the analysis of questions addressed within WP1, WP2 and WP3 of the ENGAGE project has shown that for practical reasons it is better to simplify the knowledge base structure. The concept proposed should allow at the same time for broader views on engagement, and reflexion of the different forms of, and motivations for, engagement. This should offer inspiration also for stakeholders other than radiation protection experts, and for other forms of engagement.

The information on the participatory event/practice/process is collected under the database structure given below. The database concept consists of seven sections with the following information about the event/practice/ process:

- “Provider of information” with short data about the one who is giving the information;
- “General description” where more details are giving about the context of the activity;
- “Participants” where the information is given about who was invited and who attend with what kind of motivation;
- “Process” with forms and methods and evaluations;
- “Ex-post assessment” with evaluation of the outcomes;
- “Practical information” with timeline, facilities and resources and
- Additional information and other sources.

For each of the items within these sections, further description is provided in Tale 1 to explain what kind of information is expected.

**Table 1 ENGAGE database structure**

<b>Provider of information</b>	
Organisation	
Name (optional)	
E-mail or other contact details	
<b>General description</b>	
<b>Title:</b>	<i>Short title describing the participatory practice or process</i>
<b>Country:</b>	
<b>Exposure situation:</b>	<input type="checkbox"/> Medical exposure <input type="checkbox"/> Exposure to indoor radon <input type="checkbox"/> Emergency and post-accident <input type="checkbox"/> Other
<b>Objective of the participatory practice:</b>	<i>Aims, objectives and intended outcome of the participatory practice</i>

<b>Broader context:</b>	<p><i>What was the rationale (motivation) for initiating the participation?</i></p> <p><i>What were the legal or other drivers (e.g. BSS, EU project), developments at national or local level?</i></p> <p><i>Is this practice ongoing or was it a one-time event or process?</i></p>
<b>Organisation:</b>	<p><i>Who was the initiator of the practice (e.g. regulator, Civil Society Organisation, NGO, etc.)?</i></p> <p><i>Who was the organiser?</i></p> <p><i>What was the funding body (e.g. regulator, EU, crowd funding, private funding, etc.)?</i></p>
<b>Participants</b>	
<b>Opportunities for participation:</b>	<p><i>Provide information on both the expected participants, as well as the actual participants. Specify which stakeholders chose not to take part or interact or were unable to, and made this explicit.</i></p> <p><i>Was participation open or based on invitation only?</i></p>
<b>Motivations for participating</b>	<i>Did participants express their motivation to participate? Please provide information</i>
<b>Process</b>	
<b>Participation forms and methods:</b>	<i>Please mention both institutional (e.g. workshops; citizens' juries; town hall meetings; information campaign) and non-institutional forms (e.g. citizen-led monitoring network).</i>
<b>Process evaluation:</b>	<i>Has there been a critical evaluation of the process by the stakeholders or external actors? Have there been any improvements considered and/or implemented?</i>
<b>Flexibility:</b>	<p><i>Were the process and its outcomes predefined, or elaborated with stakeholders?</i></p> <p><i>Were there opportunities to revise or adapt the process based on stakeholder input?</i></p>
<b>Ethical considerations:</b>	<i>Were there elements such as transparency (including clarity, access to information, etc.), Equality and Fairness, Representativeness, Collaboration, Influence considered? In which ways?</i>

<b>Ex-post assessment</b>	
<b>Actual outcomes:</b>	<i>What were the results, outcome and impact of the process/ event (e.g. new policies, reviews of existing policies, changes in policy design or structural reforms, improved radiation protection, etc.)?</i>
<b>Outcome evaluation:</b>	<i>Has there been an evaluation of the outcomes by the stakeholders or external actors?</i>
<b>Key strengths:</b>	<i>What features of the practice do you consider as its key strengths?</i>
<b>Challenges:</b>	<i>What challenges were encountered during development and implementation and how were they overcome (or not)?</i>
<b>Feedback:</b>	<i>How was feedback provided to (non)participating stakeholders or broader publics?</i>
<b>Practical information:</b>	
<b>Timeline of event (including preparation and planning):</b>	
<b>Facilities used:</b>	<i>Rooms, special materials, media</i>
<b>Financial resources:</b>	<i>Which financial resources were needed to implement the practice? Were the general costs and use of resources felt to be commensurate with the benefits gained from the process?</i>
<b>Human resources:</b>	
<b>Additional information and relevant documents, sources</b>	
<b>Detailed information:</b>	<i>Link to other documentation (reports, feedback forms, protocols, scenarios, etc.) relating to the process / event that may be useful for future engagement</i>

## 5 From concept to a knowledge base in operation

During the annual NERIS workshop in Dublin in April 2018, round tables were conducted to discuss different questions relevant for the ENGAGE project with representatives of authorities, technical specialists, researchers and other stakeholders. These round tables were organised jointly with the NERIS Working Group on Information, Participation and Communication.

One of the discussion topics was “A knowledge base for stakeholder engagement practices” with the following questions discussed:

- 1) Which form should a knowledge base for stakeholder engagement take to make it meaningful for you?
- 2) Which information is most useful for you?

With regards to the ENGAGE knowledge base for recording stakeholder engagement experiences, it was emphasised this should have an easily searchable electronic form, providing comprehensive information on objectives, organiser, stakeholders involved, challenges of the process, power asymmetries, use of mediator, sustainability of the process, participatory method, etcetera. Participants proposed that the stakeholder panels in the TERRITORIES and CONFIDENCE projects could be used as input for the knowledge base development. Furthermore, it was recommended that the ENGAGE knowledge base should take stock also of the previous NERIS-TP work on a stakeholder engagement database for emergency management.

As proposed also by French et al (2014), the knowledge base on stakeholder engagement in radiation protection could be hosted on a web-server using a database/knowledge management system. Users would be able to share their experiences with NERIS, SSH, CONCERT and other interested community, and access other published reports. Good search functions will be necessary to allow selection of relevant case studies.

Further steps of knowledge base development could be a part of the joint road map and could comprise the operational realisation and implementation of the ENGAGE knowledge base in practice, e.g. as an electronic database or web-based tool. This would allow end-users to consult the database or contribute to its further development and maintenance.

## 6 References

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T. Perko *et al*, 2019, Towards a common strategic research agenda for social sciences and humanities in radiation protection. *Journal of Radiological Protection J. Radiol. Prot.* **39** 766

## Appendix 1: NERIS database structure

### Basic factual information

Item	Description and notes
<b>Header section</b>	
Title	Short title describing the exercise
NERIS Reference Number	A unique reference assigned by the NERIS knowledge base
Event reference as assigned by organising body	Any unique reference number assigned by the body which organised the exercise. <i>May be blank.</i>
Date of Exercise	Period of time from start of planning the exercise to completing the analysis of the output: <i>dd/mm/yyyy to dd/mm/yyyy.</i>
Contact	Name of person or organisation role who can be contacted to find out further details of the exercise: <i>Name/role, address, email.</i>
<b>Factual Information</b>	
Participants and Stakeholders involved	A broad list identifying the range of participants. It is not expected names would be given, but instead an indication of who was represented in the exercise. E.g. Local, national, regional government, public authorities (radiation protection, food safety, public health etc.), experts, NGO's, business representatives, population, media
No of Participants	Both the desired or expected number of participants and the actual numbers taking part.
Topic	Broadly what sort of topics were covered by the exercise, e.g. one or more of: Water Management, Management of Industrial Areas, Agricultural Products Management, Agricultural Decontamination, of Recovery Workers, Urban Decontamination, Evaluation of radiological consequences (measures), Health surveillance of population, Compensation mechanisms, Waste management (materials and soil), Public Information and communication.
Phase of incident	What phase(s) of the planning and response cycle did the exercise focus on: e.g. planning/preparation, emergency (threat, early response), recovery, long term management or a transition between phases in which authority is handed over between different lead stakeholders?
Participation instruments used	Participation and other instruments used: e.g. public information or education events; full exercises; moderated table-top exercises; scenario-based workshops; stakeholder workshops; citizens' juries; co-expertise seminars; town hall meetings; information web-sites; blogs; discussion forums; simulation web-sites.
'NERIS tools' used	Which, if any, of the various tools developed by NERIS partners were used in some way during the exercise: e.g. The "handbooks", JRODOS, AgricP, ERMIN, Web-HIPRE, MOIRA.

Item	Description and notes
Chronology and dates of exercise	<p>Key dates relating to the exercise, including:</p> <ul style="list-style-type: none"> <li>• Planning start date</li> <li>• Beginning of process of inviting stakeholders and participants</li> <li>• Dates of exercise</li> <li>• Date process completed and results issued</li> </ul> <p>If a project plan/Gantt chart was prepared for the exercise this might be uploaded: see section <i>Other relevant documents</i>.</p>
Location	Where the exercise was held (may be several places if it involved several participatory instruments or may be on-line).
Facilities	<ul style="list-style-type: none"> <li>• What facilities were used?</li> <li>• How were the rooms laid out? Was the layout designed for a specific purpose in the interaction: e.g. small groups round tables for mini-breakout discussions?</li> <li>• If face-to-face, were participants accommodated overnight?</li> </ul>
Costs	<p>A summary of the main costs: Venue, accommodation, transportation, social events (reception, dinner so participants could get to know each other), other (food, interpreters...).</p> <p>Confidentiality permitting, fuller spreadsheets might be uploaded: see section <i>Other relevant documents</i>.</p>
Staff time	A summary of the staff time needed to organise, run and analyse the exercise.
Resources	A list of any other resources committed. This should include any in kind costs such as the use of room(s) not specifically charged to the exercise.

### General description

Item	Description and notes
Context	Description of the issue to be deliberated; the geographical, technical, economic, political and social contexts, political governance structures;
Main players and stakeholders; etc.	In general who were the main players in the wider process, not just who participated in the exercise, but who had an interest in it. Note any players who choose <i>not</i> to take part or interact.
Aims and objectives	The aims, objectives and intended deliverables of the exercise.
Selection of Participants	How were the actual participants identified, selected and invited. What was said in the invitation to any event to set expectations
Process	<p>Chronology, general protocol of exercise, general processes of communication (e.g. media, web, interviews and leaflets), etc. In all cases where possible, reasons for any decisions relating to the design of the process should be given and where possible related to the aims and objectives of the exercise.</p> <p>Ideally the planning documents should be attached giving full protocols for the interaction.</p>
Outcomes	Note information relating to the <i>evaluation</i> of the outcome will be collected in the next section of the knowledge base: see section <i>Evaluation according to several criteria</i> . This element of the description is meant to be more factual – e.g., where the results of the exercise were sent and what happened subsequently. Who, in fact, took part: not just who was invited. [Note: this implies that the actual number of participants should be known/recorded.]

## Evaluation according to several criteria

Item	Description and notes
Information sharing	<p>This evaluation criterion should be broken down into five sub-criteria and the exercise evaluated – probably qualitatively – against these. Supporting evidence, where available, for the judgements made should be given. For instance,</p> <ul style="list-style-type: none"> <li>• <i>Public education</i>: Were the stakeholders involved in a participation scheme provided with the necessary information in order to be familiar with the subject and have a contextual knowledge to help them actively participate and aid the decision making?</li> <li>• <i>Freedom to express viewpoints</i>: Did all the participants have the opportunity and freedom to express their viewpoints, concerns and suggestions? Were the timescales for them to do so feasible?</li> <li>• <i>Information flow</i>: Were there effective information flows between the participants? Did it flow equally between all or was it more one-way, perhaps from the agency to other participants?</li> <li>• <i>Effectiveness of channels of communication</i>: Were all channels equally effective? What led to any unequal performance? In particular, were some channels more suited to certain types of information?</li> <li>• <i>Task definition and clarity on objectives</i>: Were all participants clear on the desired outcomes of the participatory process and kept fully informed of its progress, its results and the consequences for them?</li> </ul>
Democratic ideals	<p>This evaluation criterion should be broken down into five sub-criteria and the exercise evaluated – probably qualitatively – against these. Supporting evidence, where available, for the judgements made should be given. For instance,</p> <ul style="list-style-type: none"> <li>• <i>Transparency</i>: Was the information needed for participating in a process readily and constantly visible, and available to all participants?</li> <li>• <i>Equality and Fairness</i>: Was there free and fair access to all involved parties, as well as equal opportunities for everyone to express their opinions and concerns? Furthermore, did any group or organisation have disproportionate power to bias the decision making?</li> <li>• <i>Accountability</i>: Was the process managed in an accountable manner with roles and responsibilities clearly defined?</li> <li>• <i>Representativeness</i>: Were all stakeholders represented in acceptable way – acceptable that is to the stakeholders concerned?</li> <li>• <i>Influence</i>: Did all the participants have reasonable opportunity to express their opinions and potentially to the final decisions.</li> </ul>
Community cohesion	<p>This evaluation criterion should be broken down into five sub-criteria and the exercise evaluated – probably qualitatively – against these. Supporting evidence, where available, for the judgements made should be given. For instance,</p> <ul style="list-style-type: none"> <li>• <i>Trust Building</i>: Was there trust between all the participants and how did this change over the course of the participation process?</li> <li>• <i>Reducing Conflict and Increasing Consensus</i>: Has the process brought differing stakeholders together and increased consensus on the issue(s)?</li> <li>• <i>Mutual Understanding and Respect</i>: Was mutual respect and understanding enhanced by the process.</li> <li>• <i>Stakeholder Acceptability</i>: Were the outcomes of the process accepted by stakeholders? How did acceptance differ among different stakeholders?</li> <li>• <i>Political Acceptability</i>: Was the process acceptable to the wider political and government processes at local, regional and national levels?</li> </ul>

Item	Description and notes
Practicability	<p>This evaluation criterion should be broken down into three sub-criteria and the exercise evaluated – probably qualitatively – against these. Supporting evidence, where available, for the judgements made should be given. For instance,</p> <ul style="list-style-type: none"> <li>• <i>Cost</i>: Were the general costs and use of resources felt to be commensurate with the benefits gained from the process and did all stakeholders agree on this?</li> <li>• <i>Timescales</i>: Was the process felt to be conducted in a timely manner relative to the urgency of the issue(s) and did all stakeholders agree on this? Were stakeholders able to contribute within the available time windows?</li> <li>• <i>Frequency</i>: In the wider process of managing emergency preparedness and recovery, were there concerns for the amount of stakeholder participation required? Did this process risk stakeholder fatigue?</li> </ul>
Decision quality	<p>This evaluation criterion should be broken down into two sub-criteria and the exercise evaluated – probably qualitatively – against these. Supporting evidence, where available, for the judgements made should be given. For instance,</p> <ul style="list-style-type: none"> <li>• <i>Framing</i>: Did the process bring clarity on the issues and perhaps a broader framing, relative to the agency’s initial conception? Were assumptions widely challenged and tested during the decision process.</li> <li>• <i>Structured decision making</i>: Was the structure of the decision process clearly defined and supporting analysis rigorous?</li> </ul>
Key learning points	<p>The aim of this section is to capture those ‘we should have done this’ or ‘we must ensure that we do that in future exercises’ thoughts. Not only should you list the key learning points but also try to give your reasons for selecting them. However much we try there will be some gaps in the structure that built into the database. This section is designed in part to capture recognise and learn those as the knowledge base develops.</p>

### Other relevant documents and material uploaded as files

Item	Description and notes
Project plan and/or Gantt chart	Any documentation relating to the planning of the exercise, particularly indicating the time allowed for different phases and activities.
Cost summary and budget	If possible without compromising confidentiality, spreadsheets identifying the costs relating to the exercises.
Calling note(s) and briefing documents	Copies of all materials sent to the participants, recognising that some participants may need to be anonymised.
Protocols, meeting agendas, facilitators’ scripts, etc.	Documents relating to the (planned) conduct of the exercise

Item	Description and notes
Reports, action lists, and other deliverables.	Anything relating to what the exercise delivered in relation to its objectives.
Feedback and evaluation questionnaires	All documents relating to participants' evaluation of the exercise itself. In addition to summaries of responses, it would be good to archive the raw questionnaire data if confidentiality allows.
Published papers	Ideally any journal papers, project reports other materials relating to the exercise that have been published in the open literature should be uploaded here or if not full references to where they may be found given.
Media reports	Any media reports, including relevant radio and TV recordings or links to appropriate media web-sites. If there is any question about the permanency of a web-site, the material should be uploaded if at all possible.

## Appendix 2: OECD database structure

Provider of information	Answers
<p>Organisation</p> <p>Division</p> <p>Name (optional)</p>	
Overview of the practice	Answers
<p>Name of practice</p> <p>If available, please provide links that provide further information about the practice or attach documents.</p> <p>Is this practice ongoing or was it applied only during a limited amount of time/at one specific occasion?</p> <p>In what year was the practice launched?</p> <p>Was the practice updated/reformed since then? If yes, when and how has it evolved over time?</p> <p>Please describe the practice, including information on</p> <ul style="list-style-type: none"> <li>• Features of the practice that you consider its key strengths</li> <li>• Key challenges faced during the implementation of the practice</li> <li>• Main results of the practice.</li> </ul> <p>Please provide specific details or examples to illustrate the practice (including supporting links and documents).</p> <p>What stage(s) in the process of policy making does the practice relate to? (Please tick all that apply)</p> <p>What were the objectives of the practice?</p>	
Main actors involved in the practice	Answers
<p>Responsible authority</p> <p>Country</p> <p>Level of government ( e.g. national/regional/municipal level)</p> <p>Were partners involved in preparing, implementing or evaluating the practice? If yes, please list the partners and describe their involvement.</p>	
Stakeholder involvement	Answers
<p>Which methods were used to involve stakeholders for the practice?</p> <p>Which stakeholder groups were involved?</p> <p>How were stakeholders notified of the engagement opportunity?</p> <p>What inputs were received from stakeholders (e.g., brief comments, position papers)?</p> <p>How were inputs from stakeholders used and by whom?</p> <p>Was participation limited? If yes, please describe the selection mechanism.</p>	

Was there a mechanism to ensure balanced representation among stakeholder groups? If yes, please describe the mechanism.

Was supporting material made available to stakeholders? If yes, what kind?

Was ICT used for the practice? If yes, how?

Was information on the process and the outcomes of the practice collected? If yes, what did it include?

Was this information made publicly available? If yes, where could it be accessed? Please provide a web link or copies of the relevant documents

Was feedback provided to participating stakeholders? If yes, please describe how

### Development and implementation

### Answers

How long did the development and implementation take?

Which resources were needed to develop and set up the practice initially (i.e., staff, budget etc.)?

Which resources were needed to implement the practice (e.g., staff and budget per consultation)?

What challenges were encountered during development and implementation and how were they overcome?

Has the practice been tested before implementation? If yes, please describe.

### Outputs and evaluation of the practice

### Answers

Did the implementation of the stakeholder engagement practice lead to any new policies, reviews of existing policies, changes in policy design or structural reforms?

Was the impact of using the practice quantified? If yes, please provide key results of the quantification.

Has the practice been evaluated internally by the government? If yes, what methods were used for evaluation and what were the conclusions? If possible, please attach documents related to the documentation of the evaluation or provide a link

Has the practice been evaluated externally by other actors? If yes, who did the evaluation, what methods were used for evaluation and what were the conclusions? If possible, please attach documents related to the documentation of the evaluation or provide a link.

### Additional comments and information

### Answers

Is there any more information or documentation that would be valuable to share in relation to the practice?

### Crosslinks to OECD principles and databases

### Answers

Related further OECD material

### Sources

## Appendix 3: ENGAGE Case studies

### Appendix 3.1 Medical exposures

#### 1. Building and enhancement of a radiation protection culture among medical specialties participating to fluoroscopically guided medical procedures (Greece)

Provider of information	
Organisation	<b>Greek Atomic Energy Commission (EEAE)</b>
Name (optional)	<b>Sotiris Economides</b>
E-mail or other contact details	<b>sotiris.economides@eeae.gr</b>
General description	
<b>Title:</b>	Building and enhancement of a radiation protection culture among medical specialties participating to fluoroscopically guided medical procedures
<b>Country:</b>	Greece
<b>Exposure situation:</b>	Medical exposure
<b>Objective of the participatory practice:</b>	<p>EEAE, as the national competent authority for radiological and nuclear safety, has the responsibility to proceed to the necessary actions for the development and enhancement of a radiation protection culture at national level.</p> <p>Taking into account information from the national radiation protection database, the results from the on-site inspections, as well as related references in the literature, EEAE considers that fluoroscopically guided interventional procedures is an area which requires further attention regarding radiation protection.</p>
<b>Broader context:</b>	<p>Fluoroscopically guided medical procedures may lead to high exposures of the patients and the participating staff. Therefore, the personnel involved should have not only the required education, information and training on radiation protection, but also the necessary RP culture.</p> <p>Additionally, the European Directive 2013/59/Euratom introduces increased and specific requirements for the continuous education &amp; training on radiation protection of the personnel involved in practices with ionizing radiation including medical exposures.</p>
<b>Organisation:</b>	EEAE in cooperation with related professional and scientific societies initiated the organization of training courses covering both theoretical and practical aspects of radiation protection and emphasizing on the development and enhancement of the respective culture.

Participants	
<b>Opportunities for participation:</b>	<p>Expected participants to the training courses on radiation protection are medical specialties participating in fluoroscopically guided procedures, such as: interventional radiology, interventional cardiology, orthopaedics, urology, gastroenterology etc.</p> <p>Until now, training courses have been organised for physicians participating in interventional cardiology, gastroenterology, orthopaedics and vascular surgeons.</p> <p>However, it is expected that similar courses will be organised for the rest of the medical specialties in the near future.</p>
<b>Motivations for participating</b>	<p>The main motivations for the physicians to participate to the training courses are:</p> <ul style="list-style-type: none"> <li>• The fact that the fluoroscopically guided procedures may lead to high exposures of the patients and of the participating staff and</li> <li>• The need to conform to the respective education and training requirements of the national radiation protection regulations</li> </ul>
Process	
<b>Participation forms and methods:</b>	<p>The training courses on radiation protection are designed, organised and conducted in accordance with the related procedures described in the quality management system (QMS) implemented by the EEAE's Department of Education. The QMS is based on the ISO 29993 standard (for the provision of non-formal training).</p> <p>In this respect the training courses are designed to cover specific learning objectives for the different medical specialties.</p> <p>The organisation of each course is announced on the EEAE's web site and the physicians have to apply for their participation.</p>
<b>Process evaluation:</b>	<p>Each training course (design, organisation, material, lecturers, etc.) is evaluated by the participants after its completion with the use of a special form as described in the respective procedure in the quality management system of the EEAE's Department of Education.</p> <p>The feed-back provided by the participants is analysed and used by EEAE to improve the design and organisation of similar future events.</p>
<b>Flexibility:</b>	<p>The design and the learning objectives of each course on radiation protection are defined in accordance with the training needs of the different medical specialties participating in fluoroscopically guided procedures. The feedback provided by the participants is used for the optimisation of the course design and organisation.</p>
<b>Ethical considerations:</b>	<p>Elements such as transparency, access to information, etc. are considered during the design of each training course, in accordance with the respective procedure described in the quality management system of the EEAE's Department of Education.</p>

Ex-post assessment	
<b>Actual outcomes:</b>	<p>As stated by some physicians, after the completion of the courses they started to perceive the risk associated with ionizing radiation in a more realistic way and to use regularly this risk as an additional criterion in their decision making. They realized that simple, practical measures during their clinical routine could improve their RP performance and benefit the patients, themselves and the rest of the participating personnel.</p> <p>Additionally, the provision of this training was an excellent opportunity for the physicians to get more familiar with the optimisation tools and to understand their significance for the fluoroscopically guided interventional procedures.</p> <p>Furthermore, the training on radiation protection has a positive effect on their communication with the Qualified Experts (QE), thus facilitated the exchange of information on issues related to the optimization of the fluoroscopically guided procedures. The communication channels which were created improved the level of cooperation for addressing practical issues related to medical or occupational exposures, therefore resulting in many cases in the reduction of the respective doses.</p>
<b>Outcome evaluation:</b>	Each training course (including the outcome) is evaluated by the participants after its completion. For this purpose, a special evaluation form is used which covers various aspects (design, organisation, material, lecturers, etc.) of the course provided.
<b>Key strengths:</b>	<p>The key strengths of the training courses on radiation protection for medical specialties participating in fluoroscopically guided procedures are:</p> <ul style="list-style-type: none"> <li>• They assist the physicians to perceive the risk associated with ionizing radiation in a more realistic way and to use regularly this risk as an additional criterion in their decision making.</li> <li>• They provide the physicians with the opportunity to get more familiar with optimisation tools and to understand their significance for the fluoroscopically guided procedures.</li> <li>• They benefit the communication of physicians with the QEs, thus facilitate the exchange of information on issues related to the optimization of the interventional procedures.</li> </ul>
<b>Challenges:</b>	Until now, no specific challenges have been encountered regarding the organisation of the training courses on radiation protection for medical specialties participating in fluoroscopically guided procedures.
<b>Feedback:</b>	The (non) participating stakeholders are provided with feedback regarding the training courses on radiation protection through EEAE's website and their professional and scientific associations.
Practical information:	
<b>Timeline of event (including preparation and planning):</b>	EEAE has developed specific training programs and educational material on radiation protection for the different medical specialties participating in fluoroscopically guided procedures. At least one month is needed for the organisation of each course (announcement of the event, submission of applications by the interested stakeholders, selection of lecturers and the administrative arrangements, etc.)
<b>Facilities used:</b>	The rooms, material and equipment which are used for the conduct of the training courses on radiation protection are in accordance with the requirements set in the quality management system of the EEAE's Department of Education.

<b>Financial resources:</b>	The costs for the conduct of the training courses commensurate with the benefits for the participants and they are covered by the organisers (EEAE, societies, etc.)
<b>Human resources:</b>	The personnel of the EEAE's Department of Education is involved in the administrative arrangements for the organisation of the training courses. The lecturers are selected from a special pool developed in accordance to the related procedure described in the Department's QM system.
<b>Additional information and relevant documents, sources</b>	
<b>Detailed information:</b>	Further information regarding the training activities of EEAE on radiation protection can be found in the following link: <a href="https://eeae.gr/en/info-point/education-and-training/education-and-training">https://eeae.gr/en/info-point/education-and-training/education-and-training</a>

## Appendix 3.2 Exposures to indoor radon

### 1. Exposure to indoor radon: Actions undertaken in the framework of the implementation of the radon national action plan 2012-2020 (Switzerland)

<b>Provider of information</b>	
Organisation	<b>Federal Office of Public Health, Switzerland</b>
Name (optional)	<b>Fabio Barazza</b>
E-mail or other contact details	<b>fabio.barazza@bag.admin.ch</b>
<b>General description</b>	
<b>Title:</b>	Actions undertaken in the framework of the implementation of the radon national action plan 2012-2020
<b>Country:</b>	Switzerland
<b>Exposure situation:</b>	<input type="checkbox"/> Medical exposure <input checked="" type="checkbox"/> Exposure to indoor radon <input type="checkbox"/> Emergency and post-accident <input type="checkbox"/> Other
<b>Objective of the participatory practice:</b>	The main goals are the promotion of protective measures against radon in buildings, planning an efficiency strategy for remediation, including radon in the training of construction experts and improving public awareness to health problems caused by radon.

<b>Broader context:</b>	<p>Switzerland is strongly affected by the radon problem. It is clear that besides a legal framework, additional actions are needed and therefore a national action plan was developed.</p> <p>All actions in the context of the radon problem are based on corresponding regulations included in the ordinance on radiation protection since 1994.</p> <p>It is planned to introduce a new action plan in 2021.</p>
<b>Organisation:</b>	The Swiss national radon action plan was developed, implemented and funded by the Federal Office of Public Health.
<b>Participants</b>	
<b>Opportunities for participation:</b>	The most important partners for the implementation of the action plan were the local authorities (cantons). In addition, many universities, in particular of applied sciences, as well as other federal organizations were involved. Overall, there was a strong willingness to participate and participation was open to all interested parties.
<b>Motivations for participating</b>	All important partners for the implementation of the action plan were motivated to participate.
<b>Process</b>	
<b>Participation forms and methods:</b>	<ul style="list-style-type: none"> <li>• Conferences</li> <li>• Workshops</li> <li>• Information campaigns</li> <li>• Training courses</li> </ul>
<b>Process evaluation:</b>	The process has not been evaluated.
<b>Flexibility:</b>	The main goals of the action plan were defined in collaboration with the local authorities (cantons). They were our most important partners. The aims were not adapted during the process.
<b>Ethical considerations:</b>	Ethical aspects such as transparency, equality, fairness, and collaboration are considered in all activities of the Federal Office of Public Health.
<b>Ex-post assessment</b>	
<b>Actual outcomes:</b>	The main outcome is a new legal framework for the protection against radon laid out in the revised ordinance on radiation protection. In addition, new measurements protocols, training courses for radon experts, and teaching material for the formation of different professional within the construction sector were introduced. The role and duties of recognized measuring services were clarified. The radon map and the radon database were developed further.
<b>Outcome evaluation:</b>	The outcomes of the action plan have been evaluated by an external evaluator. The corresponding recommendations constitute an important input for the development of the future strategy concerning the protection against radon.
<b>Key strengths:</b>	The participation and involvement of all relevant partners in the process of improving the protection against radon.
<b>Challenges:</b>	The public and many members of the construction sector such as architects and other construction experts could not always be convinced that the radon problem is important.
<b>Feedback:</b>	All activities and outcomes of the action plan have been published and made available.

<b>Practical information:</b>	
<b>Timeline of event (including preparation and planning):</b>	The action plan is in progress from 2012 to 2020. The revised ordinance took effect in 2018.
<b>Facilities used:</b>	No special facilities were used.
<b>Financial resources:</b>	The financial resources used were justified in view of the achieved results.
<b>Human resources:</b>	Cannot be quantified.
<b>Additional information and relevant documents, sources</b>	
<b>Detailed information:</b>	<a href="http://www.ch-radon.ch">www.ch-radon.ch</a>

## 2. Communication and Management of intervention in case of a high radon exposure level in a public school (Belgium)

<b>Provider of information</b>	
Organisation	<b>University of Liège</b>
Name (optional)	<b>Catherine FALLON</b>
E-mail or other contact details	<b>Catherine.fallon@uliege.be</b>
<b>General description</b>	
<b>Title:</b>	Communication and Management of intervention in case of a “crisis” linked to the measure of a high radon exposure level in public school.
<b>Country:</b>	Belgium (Wallonia)
<b>Exposure situation:</b>	<input type="checkbox"/> Medical exposure <input checked="" type="checkbox"/> Exposure to indoor radon <input type="checkbox"/> Emergency and post-accident <input type="checkbox"/> Other
<b>Objective of the participatory practice:</b>	In case of radon “crisis management”, explain to the families the health concerns related to radon and the possibilities for mitigation
<b>Broader context:</b>	The local authority had to handle the “crisis” after the measure of very high radon level in a public primary school. The parents and teachers had to be informed : they were scared by the risks they / their children might be exposed to

<b>Organisation:</b>	<p>The local authorities organise the participation (under the form of meetings) and information (leaflets): they are formally in charge of organising activities to ensure local safe environment for all the residents</p> <p>The Provincial unit comes on site to help find a solution when mitigation is necessary by working with the local authorities; the latter also develops specific communication activities upon request by the local authorities and organise public conferences, focus groups, etc. in a high risk areas to convince all residents to perform the tests and to further invest into remediation.</p> <p>The federal agency coordinates the whole process for communication on the level of the region but NOT during a specific episode of the “crisis”</p>
<b>Participants</b>	
<b>Opportunities for participation:</b>	<p><b>1<sup>st</sup> meetings (upon invitation only)</b></p> <ul style="list-style-type: none"> <li>- Teachers of the school</li> <li>- Parents : a very large number of the parents were present for the first meeting; less for the 2nd meeting once the crisis episode was over (after mitigation)</li> </ul> <p><b>2<sup>nd</sup> wave of meetings</b> (with a local information of the activities and no personal invitation) :</p> <p>Local residents in the neighbourhood were invited : only 1/150 did show up</p>
<b>Motivations for participating</b>	<b>For the 1<sup>st</sup> meetings the participants were very much concerned by the issue as workers and as parents of exposed children</b>
<b>Process</b>	
<b>Participation forms and methods:</b>	<ul style="list-style-type: none"> <li>- Local meetings</li> <li>- Town Hall meetings</li> <li>- Information campaign in the local medias</li> </ul>
<b>Process evaluation:</b>	<b>NO</b>
<b>Flexibility:</b>	The process was very informally designed with the political authorities taking the lead and with the support of the Provincial medical expert who was leading the whole meeting (information and answering personal questions)
<b>Ethical considerations:</b>	<b>YES, as it is always the case when the local authorities have to lead a public meeting on health (and dwellings) related issues</b>
<b>Ex-post assessment</b>	
<b>Actual outcomes:</b>	<ul style="list-style-type: none"> <li>- Changes in policies : more information on the area of radon for the new buildings</li> <li>- Changes in living practices : more attention is given to the air quality in the public buildings</li> <li>- Local promotion of the federal campaigns → Higher participation</li> <li>- Proposition for mitigation experts in case of high exposure of radon</li> </ul>
<b>Outcome evaluation:</b>	<b>Yes, by the medical expert.</b>
<b>Key strengths:</b>	Level of concerns by the parents rapidly decreased once they were convinced that their health concerns were taken seriously and that rapid and efficient remediation on the site was organised, while keeping them informed.

<p><b>Challenges:</b></p>	<p><b>Communication with the local residents who were NOT affected by the radon crisis in the local school was difficult : they did not take part in the following meetings</b></p> <p>The distribution of responsibility in the federal Belgium is complex. The federal authority (FANC) is very much associated to <b>risk assessment. The regional authorities are not much involved in radon management.</b></p> <p>Only the provincial environmental analysis services for indoor pollution (SAMI's) contribute to the campaigns for radon measurements coordinated by FANC; and In case of need for mitigation, the SAMI's can give support to the owners (private or public) : <b>It makes the SAMI's the main public experts for radon risk management.</b></p> <p>The interactions between the SAMI's and the local authorities are considered as very supportive, particularly with reference to efficient risk management and communication. SAMI's tend to act as "brokers" between FANC (and their European obligations in terms of risk assessment) and the local authorities.</p>
<p><b>Feedback:</b></p>	
<p><b>Practical information:</b></p>	
<p><b>Timeline of event (including preparation and planning):</b></p>	<p>48 h (a case of urgency and crisis communication)</p>
<p><b>Facilities used:</b></p>	<p>local school building itself, because this place is very familiar to the concerned parents (and teachers) : it is easier to address the issue in a familial environment</p>
<p><b>Financial resources:</b></p>	<p>none</p>
<p><b>Human resources:</b></p>	<p>public servants for organisation and communication (20hrs) and a medical doctor (+- 10hr)</p>
<p><b>Additional information and relevant documents, sources</b></p>	
<p><b>Detailed information:</b></p>	<p>Additional analysis in ENGAGE deliverable D9.91: <a href="http://www.engage-concert.eu">www.engage-concert.eu</a></p>

## Appendix 3.3 Emergency and post-accident exposure

### 1. Stakeholder Involvement Process in the Steering Committee for the Management of the Post-accident Phase of a Nuclear Accident or a Radiological Emergency (CODIRPA) (France)

Provider of information	
Organisation	CEPN
Name (optional)	Pascal Crouail
E-mail or other contact details	pascal.crouail@cepn.asso.fr
Creation date of the information sheet	November 2019
General description	
<b>Title:</b>	Stakeholder Involvement Process in the Steering Committee for the Management of the Post-accident Phase of a Nuclear Accident or a Radiological Emergency (CODIRPA)
<b>Country:</b>	France
	<input type="checkbox"/> Medical exposure <input type="checkbox"/> Exposure to indoor radon <input checked="" type="checkbox"/> Emergency and post-accident <input type="checkbox"/> Other
<b>Objective of the participatory practice:</b>	In 2005, the National directorate for nuclear safety and radiation protection (DGSNR), which since 2006 has become the French Nuclear Safety Authority (ASN), established a Steering committee for the management of the post-accident phase of a nuclear accident or a radiological emergency (CODIRPA), at the request of the Government. This process involved a large number of stakeholders (public authorities, operators, NGO's, TSO experts, etc.) through Working Groups (WGs) and Pluralistic Committees to elaborate "Policy elements for post-accident management of nuclear accident"
<b>Broader context:</b>	<p>CODIRPA was created in 2005, and is still in operation in 2019 (date of creation of this information sheet).</p> <p>When CODIRPA was created, there was no regulatory framework that imposed by law to start the reflection about post nuclear accident management issues and to establish specific response plans for hypothetical events that were considered 'unlikely to occur'. However, the nuclear safety and radiological protection authority together with the ministries and other concerned stakeholders, drafted a government circular (DGSNR/DHOS/DDSC 2005/1390<sup>1</sup>), which defined the organization of the State services for radiological emergency situations not covered by already existing emergency response plans in case of disasters or malevolent acts (ORSEC, PPI-ORSEC or Pirate-NRBC). This circular stated a new sharing of responsibilities for the crisis response and public information between the licensees and operators, the prefect of department, the DGSNR TSOs (e.g. IRSN), firefighters, social medical and health services, the mayors, etc.</p>

<sup>1</sup> [Circulaire DGSNR/DHOS/DDSC n° 2005/1390 du 23 décembre 2005](#) relative aux principes d'intervention en cas d'événement susceptible d'entraîner une situation d'urgence radiologique hors situations couvertes par un plan de secours ou d'intervention

	<p>Four trigger factors/events have fostered the creation of CODIRPA (point of view of the Head of the Ionizing Radiation and Health Department of the French Safety Authority, in charge of managing CODIRPA - semi-structured interview of J.L. Godet on the 5th February, 2019):</p> <ul style="list-style-type: none"> <li>- <i>“the strong commitment of the President of DGSNR (A.-C. Lacoste) to initiate at the national level a pluralistic reflection about post-accident management and display exemplarity on the international scene in this domain,</i></li> <li>- <i>the dissemination of feedback from post-Chernobyl accident management synthesized in the PAREX study in 2005 (e.g. ETHOS and CORE projects implemented in Belarus)<sup>2</sup>,</i></li> <li>- <i>the aftermath of 09/11 terrorist attacks in USA, which raised the possible vulnerability of nuclear installations to such external events,</i></li> <li>- <i>the publicization and reinforcement of the campaign of pre-distribution of stable iodine tablets in the vicinity of nuclear power plans (‘PPI perimeters’), started since 1997.”</i></li> </ul> <p>Shortly (about one year), the promulgation of the ‘TSN Law’ - no 2006-686, 13 June 2006 - on Transparency and Security in the Nuclear Field improved and clarified the roles and duties of the nuclear safety regulatory body which, at this occasion became an independent administrative authority (renamed ASN). This law laid down a set of measures to prevent accidents in nuclear installations and to limit the possible consequences. At the same time, it met with procedures guaranteeing public information on nuclear activities and (new) structures for topical consultation and discussion with the interested parties.</p> <p>The creation of CODIRPA, one year before the TSN Law, anticipated these new status and prerogatives of ASN with the strong willingness to engage stakeholders and interested parties in the reflection and construction of the French post-nuclear accident management policy.</p>
<p><b>Organisation:</b></p>	<p>The initiator and funding body of the process was the French Safety Authority (ASN).</p>
<p><b>Participants</b></p>	
<p><b>Opportunities for participation:</b></p>	<p>At the national levels, four ministries (Home Affairs, Environment, Agriculture, Health) were invited to participate, as well as Technical Support Organisations (TSOs) for developing or strengthening regulatory and technical capabilities in radiological protection and safety (IRSN<sup>3</sup>), health and medical surveillance (INVS<sup>4</sup>), industrial risks (INERIS<sup>5</sup>).</p> <p>It has to be noted that, from the beginning, it was decided to invite non-governmental organizations and environmental protection associations including anti-nuclear NGOs in the process of elaboration of the doctrine (e.g. ACRO, EDA, CLCV, Robin des Bois, CEPN)<sup>6</sup>.</p>

<sup>2</sup> <https://www.asn.fr/Prevenir-et-comprendre-l-accident/Accident-de-Tchernobyl>

<sup>3</sup> IRSN : Institute for Radiation Protection and Nuclear Safety – [www.irsn.fr](http://www.irsn.fr)

<sup>4</sup> INVS : French Institute for Public Health Surveillance – [invs.santepubliquefrance.fr](http://invs.santepubliquefrance.fr)

<sup>5</sup> INERIS : French National Institute for Industrial Environment and Risks – [www.ineris.fr](http://www.ineris.fr)

<sup>6</sup> ACRO: Association pour le Contrôle de la Radioactivité dans l’Ouest - [www.acro.eu.org](http://www.acro.eu.org); EDA: Environnement et Développement Alternatif - [eda-lille.org](http://eda-lille.org); CLCV: Association nationale de défense des consommateurs et usagers [www.clcv.org](http://www.clcv.org); Robin des Bois: Association pour la protection de l’Homme et de l’environnement [www.robindesbois.org](http://www.robindesbois.org); CEPN: Centre d’étude sur l’Evaluation de la Protection dans le domaine nucléaire – [www.cepn.asso.fr](http://www.cepn.asso.fr)

	<p>Only one of them refused to participate to the works (CRII-RAD<sup>7</sup>). Some did not refuse explicitly but never participated (e.g. FNE<sup>8</sup>) to the elaboration of the first elements of the post-accident management doctrine.</p> <p>It has to be noted that some of the NGO representatives pointed out that they participated to the work on an <i>intuiti personae</i> basis, without an official agreement (and sometimes expressions of reluctance) made by the General Assembly or other members from their associations.</p> <p>In a first phase, it was voluntarily decided not to include operators in the CODIRPA process as they were other existing instances to discuss the topic with them. In 2008, they were invited to join together with representatives of neighbour country authorities (Luxemburg, Switzerland, Germany - Belgium declined) and representatives of the Local Liaison Committees (they are pluralistic public information committees established in the vicinity of each nuclear installation, whose roles and prerogatives were reinforced by the TSN Law in 2006).</p> <p>The sustainability of the participation of external stakeholders was ensured by specific funding (T&amp;S costs reimbursement and grants given to 3 environmental associations).</p> <p>In fact, there was no specific condition for being a member or participate to CODIRPA work. Post-accident issues include so many aspects that it was not considered <i>per se</i> as a domain of expertise. As such, there was no verification of possible conflict of interest.</p> <p>A that time, CODIRPA was the first and unique pluralistic structure launched and steered by ASN: the President of ASN chaired personally the CODIRPA as well as all plenary meetings.</p>
<p><b>Motivations for participating</b></p>	<p>Point of view of one member from an NGO (EDA - Environnement et Développement Alternatif), who participated since the beginning in the CODIRPA (semi-structured interview of Anita Villers on the 24th April, 2019) :</p> <p><i>“The EDA Association - Environment and Alternative Development - was created in 1990, with the initial objective to the fight against soil pollution and its impact on the health of the population. It continues now its activities, including all sorts of pollution. Since its creation, this Association wanted to carry out its actions in a constructive way, being involved as stakeholder in the search for alternative solutions with all the actors concerned.</i></p> <p><i>When ASN contacted EDA asking for its participation in the CODIRPA, EDA was already involved in several actions in the nuclear field undertaken by IRSN (Department on Openness to Society). However, there was initially some reluctance of some members of the Association to participate in CODIRPA because they thought that the NGO ‘should not compromise with the nuclear power lobby’. But there was also a willingness to participate from several other members (including the former president) because it was an opportunity to form their own opinion and to play a watchdog role by being able to intervene in decisions”.</i></p>

<sup>7</sup> CRII-RAD: Commission de recherche et d’information indépendantes sur la radioactivité - [www.criirad.org](http://www.criirad.org)

<sup>8</sup> FNE : France Nature Environnement – [www.fne.asso.fr](http://www.fne.asso.fr)

Process	
<p><b>Participation forms and methods:</b></p>	<p>Although there is an official mandate (signed by the Prime Minister – and renewed periodically every ~5 years) for the DGSNR (and then ASN) to elaborate a policy for post-accidental management, the methodology and endpoint of the work has never been explicitly defined, nor its organization and agenda.</p> <p>1<sup>st</sup> Phase (2005-2007): Progressive involvement of non-institutional experts - Co-construction at the national level of the first elements of the policy with a pluralistic participation</p> <p>Step by step, different topical working groups have been created, according to the most important issues identified in the CODIRPA plenary group sessions (36 meetings have been organized since 2005). The first ones that have been created were all chaired by people who did not belong to ASN staff. This was a willingness of the President of ASN. The memberships of the different working groups were also pluralistic with people representing regulatory bodies, TSOs, and NGOs. All in all, about 300 people have worked in the different WGs.</p> <p>Topics, mandates of these WGs, deliverables and reports have been defined progressively, through a consultation process between members (without vote). The results, advancement and perspectives of the work were presented at an international seminar on 6-7 December 2007 (200 participants from 18 countries). The first 6 WG reports were made available and published on the ASN website at the beginning of 2008.</p> <p>2nd Phase (2008-2010): Consultation at the local level with local administrations, decentralized State services (Prefectures) and representatives of the civil society (municipalities, NGOs)</p> <p>During the second phase of CODIRPA works, the first elements of policy have been consolidated and new scenarios of accidents have been studied.</p> <p>In parallel, a procedure for local actor’s consultation at the Prefecture and municipality levels was put in place, in order to confront the first elements of the doctrine with local (‘on-the-field’) reality, vulnerabilities and stakes. Especially, the consultation focused on the post emergency - transition to recovery phase aspects: a specific guidance for this phase was presented and discussed at the local level by different stakeholders (decentralized State services, local elected people, and NGOs). Elements of doctrine have been incorporated into communal safeguarding plans (PCS) that have to be activated in case of an emergency (i.e. natural or industrial catastrophes).</p> <p>3rd Phase (2010-2011) Co-construction at the national and local levels : Local Emergency Response Plans, Drills and exercises (including a PA dimension), Guidelines for the so-called transition and late phases, Publication of the “Policy elements for post-accident management of nuclear accident”</p> <p>Two pluralistic committees (“commissions”) were then created to look at the post-accident issues in a more transversal/chronological way in order to complement the topical approach adopted during the first phase: the first one was devoted to the “transition” phase, the other worked on the “longer term” aspects. The commissions were in charge of the elaboration of Guidelines for the so-called transition and late phases and the drafting of the “first elements of doctrine (“Policy elements for post-accident management of nuclear accident”).</p> <p>These activities were almost terminated by the end of 2010, and were presented at a second international seminar (5-6 May 2011) organized - by unfortunate coincidence – less than 2 months after the Fukushima accident. (The report was finally published in 2012).</p>

	<p>Finally, the main post emergency - transition to recovery phase aspects that were included in the CODIRPA doctrine have been incorporated into the governmental French National Response Plan for “Major nuclear or radiological accident(s)” (2014) elaborated by the SGDSN (General Secretariat for Defence and National Security).</p> <p>The post-accident phases were challenged during drills and national emergency exercises that have been conducted from 2009, and more routinely from 2012, using the CODIRPA elements of doctrine.</p> <p>4th Phase (since 2012): Evolution of the policy after the Fukushima accident - More severe accident taken into account (long-lasting releases) and complementary works in progress (Water resource management, Waste management, Q&amp;A to Local Health professionals, Guidance for population living in a contaminated territory)</p> <p>The fourth phase of CODIRPA (since 2012) is still running several WGs and is now adapting the elements of doctrine taking account of post-Fukushima accident feedback. The membership has not evolved a lot, and most of those who were members at the beginning of the process are still participating actively to the works, even if some are now occupationally retired.</p>
<b>Process evaluation:</b>	No formal evaluation
<b>Flexibility:</b>	<p>See description above. To complete: point of view of ASN:</p> <p><i>“The path is made by walking” could be the motto of the CODIRPA. For instance, there was no agreement of rules of engagement by establishing in advance the scope, objectives, roles, rules and risks of engagement at the beginning, or by defining how possible conflict would be solved and how and by whom the participation to the work would be considered or evaluated.</i></p>
<b>Ethical considerations:</b>	-
<b>Ex-post assessment</b>	
<b>Actual outcomes:</b>	Publication in 2011 of the “Policy elements for post-accident management of nuclear accident” <sup>9</sup>
<b>Outcome evaluation:</b>	<p>No formal evaluation</p> <p>Points of view collected in 2019:</p> <p><u>Evaluation by the representative of the Safety Authority, ASN</u></p> <p><i>The richness and usefulness of CODIRPA works is derived from its unique and original process of engaging new stakeholders (in fact, their engagement was self-initiated), especially local NGOs, in decision-making. The complexity of post-accident management issues imposes to engage a lot of different people, with skills and competences in different domains, and with local perspectives and acute knowledge of the potentially affected territories. It has been difficult to involve all needed types of stakeholders (for instance CODIRPA failed to involve jurists).</i></p> <p><i>There was no formal evaluation process put in place to assess the whole process of CODIRPA. Nevertheless, it has to be noted that there has been no reservation made by members about the reports issued by the WGs and the “elements of</i></p>

<sup>9</sup> The report is available on the ASN website: <https://www.asn.fr/Prevenir-et-comprendre-l-accident/Gestion-post-accidentelle/Elements-de-doctrine>

	<p><i>doctrine” published in 2012. However, during plenary sessions, objections have been expressed by different members.</i></p> <p><i>The keys of success of CODIRPA until now are: the absence of a prior structuration of activities, the accessibility and openness (no numerus clausus), the use of a common language, the search for consensual decisions and orientations of the works (i.e. the least objectionable by the largest number of members).</i></p> <p><i>The CODIRPA has shown its efficiency. A similar approach could be also useful with regard to the emergency phase management (elaboration of the PPI perimeters, for instance). The implementation of a pluralistic approach in the elaboration of national plans/doctrines, especially in the nuclear domain, remains quite rare. In France, two other experiences of co-construction and concertation with external stakeholders, that are supported by ASN, have to be mentioned: the PNGMDR (Radioactive waste and matters management plan) and the COFSOH (Orientation Committee on Organizational and Human Social Factors).</i></p> <p><u>Evaluation by the representative of a NGO: EDA</u></p> <p><i>What was much appreciated in the participation of CODIRPA are:</i></p> <ul style="list-style-type: none"> <li>- <i>A climate of respect and trust in the working groups and the plenary meetings.</i></li> <li>- <i>The construction over time of a mutual understanding between all members of the WGs and the experts from the Authority or the TSO (IRSN).</i></li> <li>- <i>A direct language, without waffle.</i></li> <li>- <i>The opportunity to share with experts the territorial issues.</i></li> </ul> <p><i>What was missing or should be improved:</i></p> <ul style="list-style-type: none"> <li>- <i>There were not enough dissemination and sharing of the work outside the WGs. Notably there were not enough involvement of ASN or IRSN in actions to disseminate the Post Accident Doctrine at the local level, among the Local Commissions of Information (CLIs) or inhabitants.</i></li> <li>- <i>There is a feeling that the work has not been valued at the height of everyone's commitment.</i></li> <li>- <i>Some key actors are missing: farmers, professional unions, journalists and the media, representatives of the different colleges of the CLIs.</i></li> </ul> <p><i>For the future:</i></p> <ul style="list-style-type: none"> <li>- <i>There is a need to think about new means of communication, notably for the young generations (web, apps, ...).</i></li> <li>- <i>There is an issue regarding the perpetuation of the involvement of some NGOs within debating fora, due to an ageing of their members and to difficulties to involve younger ones.</i></li> </ul>
<p><b>Key strengths:</b></p>	<ul style="list-style-type: none"> <li>- The absence of a prior structuration of activities : the WGs were created step by step, in order to answer to the questions raised in the discussion</li> <li>- The accessibility and openness to any member in the WGs (no numerus clausus),</li> <li>- The construction with time of a common language, a mutual understanding between all members of the WGs, creating a climate of respect and trust</li> <li>- The strong involvement of the President of ASN, personally chairing the plenary sessions</li> <li>- The strong implication of TSOs</li> <li>- The search for consensual decisions and orientations of the works (co-construction process)</li> </ul>

<b>Challenges:</b>	<p><u>Challenges associated with a long process (CODIRPA work started in 2005)</u></p> <ul style="list-style-type: none"> <li>- Feeling of weariness of some participants, together with redundancies of the subjects discussed in the WGs</li> <li>- Difficulties to have a renewal and rejuvenation of participants             <ul style="list-style-type: none"> <li>- Need to revitalize the CODIRPA and to find new modalities and methodologies of implication</li> <li>- Local meetings on specific thematic, involving the relevant actors</li> </ul> </li> <li>- Exercises, territorial microprojects on a specific question related to post-accident management/preparedness, etc., with the implication of regional branches of ASN, and new actors in different regions</li> <li>- Need to involve new stakeholders, specially at local level, and/or representing actors not yet involved but who have a major role to play in post-accident management.</li> </ul> <p><u>Challenges associated with the involvement of some NGO's</u></p> <ul style="list-style-type: none"> <li>- Availability of their members             <ul style="list-style-type: none"> <li>- Few members can devote their time sufficiently over the long term</li> <li>- Solicitations into RP related topics increase with time</li> <li>- Ageing of members and difficulties to have young generations involved</li> </ul> </li> <li>- Financing issues             <ul style="list-style-type: none"> <li>- NGOs, especially the smallest ones, are facing financial resource depletions.</li> </ul> </li> </ul>
<b>Feedback:</b>	-
<b>Practical information:</b>	
<b>Timeline of event (including preparation and planning):</b>	
<b>Facilities used:</b>	-
<b>Financial resources:</b>	-
<b>Human resources:</b>	
<b>Additional information and relevant documents, sources</b>	
<b>Detailed information:</b>	<a href="https://www.asn.fr/Prevenir-et-comprendre-l-accident/Gestion-post-accidentelle">https://www.asn.fr/Prevenir-et-comprendre-l-accident/Gestion-post-accidentelle</a>