

# Report on the fourth Meeting on 11 and 12 May 2022

The Austrian Board for Radioactive Waste Management („**Advisory Board**“ for short) met for its fourth session on 11 and 12 May 2022. At this meeting, all four mandate items of the Advisory Board were discussed. Specifically, the first results of the study on the quantity of radioactive waste in Austria (mandate item 1) were examined with the aim of deriving initial recommendations from it. Another objective was to clarify the procedure for the further development of the timetable and roadmap (mandate item 4) and to initiate studies on the topic of options for disposal (mandate item 2). With regard to the topic of public participation (mandate item 3), the aim was to coordinate the process of developing the framework for the participation concept on the basis of a common understanding of transparency and participation. In addition, the work of the Advisory Board in the first year was reflected upon and the roadmap for the next two years was discussed.

## Background

Based on “The National Programme for the Management of Radioactive Waste” (2018), the Advisory Board **develops a basis for decisions and recommendations for the Federal Government regarding the safe disposal of low- and intermediate-level radioactive waste** accumulated in Austria. Radioactive waste is generated in Austria through applications in medicine, research, industry and through the dismantling of facilities that are no longer required (decommissioning).

The mandate of the Austrian Board for Radioactive Waste Management defines its tasks. It is valid for three years and ends in June 2024. The four tasks according to the mandate are:

### 1. **Radioactive Waste in Austria: Survey of the Status Quo**

The aim is to survey and collect information and data on radioactive waste management, to discuss the inventory of radioactive waste in Austria as well as to evaluate the studies on the Federal Government’s previous activities with respect to final disposal. As part of this, plans are to provide a tangible overview of the existing situation. The data collected in this survey

describes the starting point in detail and provides the basis for the work of the Austrian Board for Radioactive Waste Management.

## **2. Analysis of the Options for Final Disposal**

The aim is to provide an overview of all possible options for the final disposal of radioactive waste in the form of a single document. It should include the option of cooperation with other countries and outline the requirements, strengths, weaknesses, opportunities, and risks, as well as an initial cost estimate for each option.

## **3. Framework for Public Participation**

The aim is to develop a framework for the public to participate (including cross-border measures) during the process of establishing a final repository for radioactive waste in Austria. The concept should consider technical, economic, and social aspects. Moreover, it should contain recommendations on how and when the public should be informed, involved, and included in the decision-making process.

## **4. Development of a Timetable for the Disposal of Radioactive Waste**

The aim is to define a timetable and roadmap for the disposal of radioactive waste accumulated in Austria. This draft should include, where possible, relevant intermediate stages ("milestones"), key performance indicators and precise timelines for reaching these stages.

The recommendations worked out by the Advisory Board on the individual mandate items are forwarded to the Federal Government and serve as a basis for decisions on future steps.

The Austrian Board for Radioactive Waste Management includes representatives of the Federal States and Governments, scientists, NGOs, and from the public. The Advisory Board is chaired by Silvia Benda-Kahri from the Environment Agency Austria. The members of the Advisory Board may change in the context of future mandates depending on the tasks at hand when the current mandate ends in June 2024.

## **Review**

At the third meeting of the Austrian Board for Radioactive Waste Management in January 2022, the Advisory Board decided to draw up an inventory of radioactive waste in Austria. This inventory should contain the following information:

1. Number of standard and special containers that are currently present and expected by 2045 based on defined criteria
2. Overview of the current and expected total inventory by 2045
3. Estimate of the amount of raw waste accumulated per year and the resulting conditioned barrels
4. Additional estimate of the volume based on common international repository containers

During the third meeting, a decision was made on the need for further studies and reports. The following topics were mentioned:

1. EU legal obligations: what are the requirements?
2. Final repository or continuation of interim storage facilities?
3. Example of the structure of a selection process (including best practice; IAEA rules) for the technology and the site of a repository (which technical decisions in which steps?)
4. Phases of a participation process (who is involved in which steps and in what way?)
5. Decay behaviour of radioactivity inventory and lifetime of the repository
6. Formulation of safety criteria for the overall concept of a disposal site and storage technology
7. Limits for radiation exposure and calculation methods for the dispersion of radioactive substances
8. State of the art repository technologies - advantages and disadvantages in relation to the location
9. Design of site selection criteria
10. Possibilities for multinational disposal

At the last meeting in January 2022, the Committee on the "Framework for Public Participation" presented a theoretical framework for the conception of public participation. In the interest of transparency, proposals on the further development of the website and future communication and public relations measures were presented and discussed. In addition, the members of the Advisory Board discussed the proposal to commission a basic study on the level of knowledge and understanding of the public on the subject of radioactive waste in Austria. The organisation of discussion groups in order to achieve a better understanding of the public's assessment was discussed as an additional option.

## Results of the Fourth Meeting:

The results of the fourth meeting of the Advisory Board are presented on the basis of the mandate items.

### Mandate Item 1: Radioactive Waste in Austria: Survey of the Status Quo

Nuclear Engineering Seibersdorf GmbH (NES) has compiled an inventory of radioactive waste in Austria for the Advisory Board. It was presented and discussed at the meeting. In addition, the members of the committee on "Inventory of Radioactive Waste in Austria - Focus on Quantities" formulated further questions and initial suggestions for recommendations on mandate item 1 for the final report to the Federal Government.

#### Results

Further questions arose during the discussion, which will be considered in the study. NES will present the final report on the study to all Advisory Board members in summer 2022. In the next step, the Committee will continue its work on the first recommendations and will clarify whether additional surveys of current and future radioactive waste are required. The results will be presented at the fifth meeting on 19 and 20 October 2022.

### Mandate Item 2: Analysis of the Options for the Final Disposal

At its last meeting in January 2022, the Advisory Board identified the need for different studies. The Secretariat presented the current status of preparatory work and possible detailed content for the studies. Five studies are to be commissioned, covering all nine topics discussed at the last meeting:

1. Legal framework for the disposal of radioactive waste
2. Methods for estimating the long-term behaviour and dispersion of radionuclides in the vicinity of a possible disposal site
3. Comparison of final repository options
4. Proposal for safety criteria and accident scenarios
5. Proposal for location criteria

## Results

The Advisory Board proposes to start with the studies 1-4 and to wait with the fifth study on the proposal for location criteria until the interim results of the other studies and the study for mandate item 3 are available. At the next meeting in October 2022, the first results on the legal framework and the proposal for safety criteria and accident scenarios will be presented.

### **Mandate Item 3: Framework for Public Participation**

The Committee on the "Framework for Public Participation" presented its considerations on the principles of transparency and the procedure for drawing up the participation concept. A study is planned to provide first insights into the level of knowledge and understanding of the public. To this end, the Committee has submitted the following resolution:

- A study on knowledge and understanding of the public will be commissioned.
- The questions to be addressed by this study will be prepared by the Advisory Board/Participation Committee in agreement with the authors of the study.
- The study participants are selected in consultation with the Advisory Board/Participation Committee.
- The study will be conducted using qualitative social science methods selected in consultation with the Advisory Board/Participation Committee.
- The qualitative study will start in summer 2022 and will be completed by February 2023 and presented at the sixth Advisory Board meeting.
- The decision as to whether a quantitative study should then be carried out will be made at the Advisory Board meeting in May 2023 at the latest.
- The results of the study will be included in the preparation of the participation concept.

The Committee on the "Framework for Public Participation" submitted a second draft resolution on the understanding of transparency and the procedure for creating the participation concept with the following wording: Participation is a socially significant and effective, communicative, and political process that includes sharing of information, participating and being involved in decisions. These intentions and goals are to be guaranteed and evaluated in the implementation process.

In order to achieve this, the Committee on the "Framework for Public Participation" is asked to draw up the following points and continually include them in the Advisory Board meetings:

- Development of governance rules
- Create a framework for the interface between participation processes and the political-administrative system by structuring participation through the phases of the policy cycle, and
- to ensure the framework for quality development. This is achieved through transparency and verifiability with regard to the goals, target groups and addressing procedures as well as participation procedures that are tailored to the topic and take its specifics into account (Participation is structured by the necessary decision-making process of the topic "disposal of radioactive waste" in all phases of working on the mandate's tasks)

### Results

The Advisory Board accepts the draft resolution on the design of the study and on the understanding of transparency and participation. In the next step, the Committee on the "Framework for Public Participation" will prepare a design for the study on public knowledge and understanding and will advise the Secretariat on the necessary tenders/commissioning steps. Building on the previous work, the Committee will start implementing the second resolution on the understanding of transparency and the procedure for creating the participation concept and will report on this at the next Advisory Board meeting in October 2022.

#### **Mandate Item 4: Development of a Timetable for the Disposal of Radioactive Waste**

As agreed at the last meeting in January, a working group of the Advisory Board has prepared a table (hereinafter referred to as "decision tree") listing the decisions and work steps required up to the final closure of a repository. The need for further work on this topic and additional background information to enable future recommendations to the Federal Government is expressed. The following points are mentioned in the draft resolution:

- Compare the table "decision tree" with the literature on planning a repository for radioactive waste according to the state of the art in science and technology and review the work steps and decisions entered in the table accordingly

- Check the table "decision tree" for completeness and add any necessary work steps and decisions
- When reviewing the table, it must be considered that an international solution would significantly deviate from a national solution and corresponding adaptations must be made in the table
- Based on the updated table, a report should be prepared in which the work steps and decisions noted as points in the table are explained in detail

## Results

The Advisory Board accepts the submitted proposal and recommends that the work on further steps should be taken over by the Secretariat. The developed decision tree is to be compared and completed with the literature on the planning of a repository for radioactive waste according to the state of the art in science and technology. In addition, a report is to be prepared in which the work steps and decisions noted as points in the table will be comprehensively explained. First results will be presented at the next meeting in October 2022.

The content of the studies is prepared by the Advisory Board, the formal commissioning is carried out by the Secretariat or by the Federal Ministry for Climate Action.

The next meeting of the Advisory Board will take place on 19 and 20 October 2022.

## Participants

### Advisory Board

Roman Beyerknecht (Nuclear Engineering Seibersdorf)

Philipp Bohatschek (Federal Ministry of Finance)

Manfred Ditto (Federal Ministry of Social Affairs, Health, Care and Consumer Protection)

Ulrike Felt (University of Vienna, Department of Science and Technology Studies)

Bernhard Haubenberger (Association of Austrian Municipalities)

Günter Liebel (Federal Ministry for Agriculture, Forestry, Regions and Water Management)

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Ewald Plantosar (Styria, Representation of the Federal States)

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David Reinberger (Ombuds Office for Environmental Protection Austria)

Ursula Rosenbichler (Federal Ministry of Arts, Culture, Civil Service and Sport)

Sabine Schneeberger (Federal Chancellery)

Sigrid Sperker (Upper Austria, Representation of the Federal States)

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Erik Tajalli (Federal Chancellery)

Christoph Urbanek (Lower Austria, Representation of the Federal States)

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### Other Participants

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Andrea Prutsch (Environment Agency Austria) Co-Chair

Daniela Zanini-Freitag (Environment Agency Austria)

Wolfgang Neckel (Nuclear Engineering Seibersdorf)



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Media owners, publishers, and editors:

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Status: 12 May 2022

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Created on: 12 May 2022