

# **Second Activity Report of the Austrian Board for Radioactive Waste Management**

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## Preface



Leonore Gewessler

The Austrian people decided against the use of nuclear energy in 1978 and in 1999 this was embedded in our Constitution. Therefore, Austria does not generate high-level radioactive waste and spent fuel from nuclear power plants. Nevertheless, low- and intermediate-level radioactive waste is produced through the use of radioactive materials in medicine, industrial processes, and research and from the dismantling of facilities that are no longer needed.

With the establishment of the Austrian Board for Radioactive Waste Management („Advisory Board“ for short) in 2021, a first important - long overdue - step towards the long-term storage of this low-level and intermediate-level radioactive waste was taken. As an interdisciplinary and transparent advisory body, the Advisory Board develops a basis for decisions and recommendations regarding the safe disposal of radioactive waste generated in Austria.

The establishment of the Advisory Board is an important step in a process that should lead to the best possible solution for the disposal of the radioactive waste generated in Austria. In doing so, Austria takes responsibility for keeping the impact on future generations as low as possible. Only the responsible disposal of radioactive waste can guarantee long-term protection of human health and avoids endangering the environment.

Taking public interests into account is one of the biggest challenges and, at the same time, an essential criterion of success. It is therefore all the more important, in addition to the political debate, to inform the public and gradually involve them in the process. The Advisory Board is composed of scientists, non-governmental organisations (NGOs), representatives of the Federal and State Governments, as well as representatives of civil society. It is coordinated by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology. The Advisory Board should enable the topics and issues to be addressed in a comprehensive way, on the basis of which the technical issues can also be discussed and resolved to the best possible extent.

This activity report for the year 2022 shows that the work of the Advisory Board is already fully underway. Committees were set up, studies and excursions were carried out, and initial results were discussed. Transparency, openness, and participation play a very important role in this process and are lived by the Advisory Board. This was also

particularly appreciated internationally at the 7th Review Conference of the Joint Convention (“Joint Convention on the Safety of Spent Fuel and Radioactive Waste”) in the summer of 2022.

The recommendations of the Advisory Board will be handed over to the Federal Government in the summer of 2024. Based on these recommendations, the next steps will be taken to ensure the best possible long-term disposal of the radioactive waste stored in Seibersdorf by 2045.

I would like to thank the members of the Advisory Board for their time and commitment!

Leonore Gewessler  
Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and  
Technology

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# 1 The Austrian Board for Radioactive Waste Management

## 1.1 Background and Legal Basis

In 1978 the Austrian people decided against the use of nuclear energy. This has also been embedded in the constitution since 1999. As a result, Austria does not generate high-level radioactive waste and spent fuel from nuclear power plants that need to be disposed of. Nevertheless, the use of radioactive materials in medicine, industrial processes and scientific research produces low- and intermediate-level waste. In particular, radioactive waste arises where (scientific research) facilities no longer required are dismantled (decommissioned).

The Directive 2011/70/Euratom on "establishing a community framework for the responsible and safe management of spent nuclear fuel and radioactive waste" obliges all Member States of the European Union to manage their radioactive waste in a safe and responsible manner. To this end, every state must draw up a national programme that covers the management of radioactive waste from its generation to its final storage and ensures the protection of the public, the environment, and future generations from ionising radiation. At the same time, the directive requires that citizens have access to all necessary information and can effectively participate in decisions regarding the disposal of radioactive waste.

A draft of "The National Programme for the Management of Radioactive Waste" was prepared on behalf of the Federal Government and subjected to the Strategic Environmental Assessment required by law. This procedure aims to ensure that the programme has no negative environmental impact and at the same time gives the public - including neighbouring countries - the opportunity to participate in the compilation of the programme. The comments received were taken into account during the finalisation of the National Programme for the Management of Radioactive Waste.

**The National Programme for the Management of Radioactive Waste (NEP)** was adopted by the Federal Government in the Council of Ministers on 5 September 2018.

The National Programme for the Management of Radioactive Waste outlines the Austrian strategy for the responsible and safe disposal of radioactive waste.

It contains the applicable principles, the existing legal framework, and the practice of managing radioactive waste in Austria and provides an overview of the current and expected quantities of radioactive waste. The National Programme for the Management of Radioactive Waste outlines further steps for the final disposal of radioactive waste and examines the possibilities for disposal taking into account the waste inventory.

The National Programme for the Management of Radioactive Waste includes a provision for a working group (now called the Austrian Board for Radioactive Waste Management – „Advisory Board“ for short) made up of representatives of the Federal and State Governments, scientists, NGOs, and from the public.

The task of this working group is to develop proposals for the final disposal of radioactive waste, taking into account technical, economic and social aspects. In the context of studies and workshops, but also in cooperation with foreign institutions and experts, solutions are to be developed. In addition, the working group is to draw up a concept for the comprehensive information and involvement of the public.

## **1.2 Constitution of the Advisory Board, Obligation to Report**

On 10 March 2021 the Austrian Federal Government established the Austrian Board for Radioactive Waste Management („Advisory Board“ for short) to implement the National Programme for the Management of Radioactive Waste. This Advisory Board develops a basis for decisions and recommendations for the Federal Government regarding the final disposal of radioactive waste accumulated in Austria. The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) is responsible for coordinating the Advisory Board.

The Advisory Board has its legal basis in the National Programme for the Management of Radioactive Waste. Its tasks are described there as follows:

- To give advice on changes to the legal framework as well as the financial framework for the final disposal of radioactive waste
- Consultation on a timeframe with key milestones

- Monitoring of the development of the waste inventory at Nuclear Engineering Seibersdorf (NES), including estimates of the time it could take to reach clearance values
- Monitoring the activities of other countries with comparable waste inventories
- Information on European and international cooperation in relation to radioactive waste
- Discussion about the type and requirements of public participation and information as well as on how to guarantee transparency and participation
- Initiate and monitor research and development activities leading to an assessment of the feasibility of introducing new technologies and concepts, waste minimisation, etc.
- Development of a conceptual project for the disposal facility, but also for all other relevant elements such as transport, monitoring, etc.
- Development of criteria for the selection of disposal options, especially with regard to safety aspects
- To give advice on the requirements for the future repository operators, safety regulations of the facility and ensuring that sufficiently qualified personnel are available
- To give advice on the decommissioning concept for equipment no longer required at NES
- Support of the implementation and updating of the National Programme for Radioactive Waste Management

The Rules of Procedure for the Austrian Board of Radioactive Waste Management were issued by the Federal Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology on 10 March 2021. Pursuant to § 13 of the Rules of Procedure, the Advisory Board must prepare an annual activity report, which is to be published by the Secretariat.

According to The National Programme for the Management of Radioactive Waste, the Advisory Board has to report regularly on its activities to the Federal Government and present the results as a basis for decisions. In order to ensure sufficient time for the possible construction and commissioning of the facility(ies) for the final disposal, the decision on the final disposal of radioactive waste should be made no later than 10 to 15 years before the contractual end of interim storage facility. However, the aim is to take the decision at an earlier date.



### 1.3 Establishment of the Secretariat

A Secretariat set up by the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) at the Austrian Agency for Health and Food Safety GmbH (AGES) provides technical and administrative support to the Advisory Board. It coordinates and administers the activities of the Advisory Board.

The Secretariat has the following tasks:

- Preparation and organisation of meetings
- Support of the Advisory Board in commissioning specialized expertise and studies
- Development of a basis for discussions and decisions on upcoming issues, as well as provision of technical expertise for the Advisory Board
- Writing of meeting minutes
- Documentation of discussion results
- Interface between the public and the Advisory Board

The Secretariat of the Advisory Board established at AGES took up its activities on 1 March 2021.

### 1.4 Mandate June 2021 - June 2024

The mandate of the Austrian Board for Radioactive Waste Management was issued by the Federal Government at the Council of Ministers meeting on 10 March 2021 and is valid for three years, i.e., until June 2024. After that, the Federal Government will issue another mandate based on the recommendations of the Advisory Board and the final report.

In the first three years the Advisory Board will work on topics and issues to present the status quo regarding radioactive waste in Austria and to gradually show a path towards the final disposal of radioactive waste. The search for a suitable site for a repository and the decision on the type of repository are not included in this phase.

Until June 2024 the mandate of the Advisory Board includes the following four points:

#### 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.

## **1.5 Members**

The Advisory Board consists of 20 members for the mandate up to June 2024; seven of them are technical experts, three representatives of civil society, nine representatives of the Federal and State Governments and one representative of the Association of Municipalities. Together they develop recommendations for the final disposal of radioactive waste in Austria.

The Advisory Board is chaired by Silvia Benda-Kahri from the Environment Agency Austria. The Chair was entrusted with this function by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology on 10 March 2021; she is not a member of the Advisory Board and thus has no voting rights. The task of the chairperson is to supervise the meeting and to work towards a consensus among the members of the Advisory Board on the decisions to be taken.

Table 1 Members of the Advisory Board at the time of establishment in alphabetical order

<b>Name</b>	<b>Institution</b>
<b>Roman Beyerknecht</b>	Nuclear Engineering Seibersdorf
<b>Philipp Bohatschek</b>	Federal Ministry for Finance
<b>Manfred Ditto</b>	Federal Ministry of Social Affairs, Health, Care and Consumer Protection
<b>Ulrike Felt</b>	University of Vienna Department of Science and Technology Studies
<b>Bernhard Haubenberger</b>	Association of Austrian Municipalities
<b>Günter Liebel</b>	Federal Ministry for Agriculture, Forestry, Regions and Water Management
<b>Patricia Lorenz</b>	Global 2000
<b>Frank Melcher</b>	Montanuniversität Leoben Chair of Geology and Economic Geology, Applied Geosciences and Geophysics
<b>Gabriele Mraz</b>	Austrian Institute for Ecology
<b>Nikolaus Müllner</b>	University of Natural Resources and Life Sciences Institute of Safety and Risk Sciences
<b>Ewald Plantosar</b>	Office of Styrian Government
<b>Horst Reicher</b>	Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology
<b>David Reinberger</b>	Ombuds Office for Environmental Protection Austria
<b>Ursula Rosenbichler</b>	Federal Ministry of Arts, Culture, Civil Service and Sport
<b>Sabine Schneeberger</b>	Federal Chancellery
<b>Sigrid Sperker</b>	Office of the Government of Upper Austria

Name	Institution
Angelika Spieth-Achnich	Öko-Institut e.V., Institute of Applied Ecology, Germany
Johannes Sterba	Technical University of Vienna Atomic and Subatomic Physics
Christoph Urbanek	Office of the Government of Lower Austria
Hannelore Weck-Hannemann	University of Innsbruck Department of Public Finance, Faculty of Economics and Statistics

Image 1 The Members of the Advisory Board, first Meeting in June 2021 (Copyright: AGES/Drott)



## 1.6 Working Method

The framework for the work of the Advisory Board is established by the mandate issued by the Federal Government as described in 1.4. The mandate defines the goals and outlines the topics that need to be addressed. The Rules of Procedure provide the formal framework. The Rules of Procedure set out the requirements for the establishment, tasks (according to the mandate), composition, members, membership, chairmanship, Secretariat, preparation and conduct of meetings, attendance, committees, consultation documents, resolutions, record keeping, reporting, and informing the public.

In order to be able to support the members of the Advisory Board in their work in the best possible way, the chair has based the design of the process on four central guidelines:

- A setting that enables constructive work
- Use a variety of methods to draw on broad expertise and ideas
- Allow flexibility in order to respond to needs
- Build in feedback opportunities to ensure that the process design is conducive to work

The process design provides for an iterative structuring in four process steps adapted to the topics. These are:

- Discover: Familiarisation with the topics of the mandate
- Define: Definition of issues relevant to the mandate topics as a basis for fact-finding missions
- Develop: Development of recommendations based on shared insights
- Deliver: Consensus on recommendations relevant to the issues of the mandate and communication of the results

# 2 Activities of the Advisory Board on the Implementation of the Mandate in 2022

## 2.1 Meetings of the Advisory Board

At the constituent meeting of the Advisory Board, it was decided by consensus to hold three meetings per year.

The following meetings were held in 2022:

Meetings of the Advisory Board in 2022:

- 26 and 27 January 2022 (third meeting)
- 11 and 12 May 2022 (fourth meeting)
- 19 and 20 October 2022 (fifth meeting)

The third meeting had to take place online due to the COVID-19 situation. The objectives of the meeting were to deepen the understanding of the mandate, to identify gaps in knowledge, to share the work of the committees, and to commission studies. The three committees established in 2021 reported on their work.

The Committees are:

- Radioactive Waste in Austria – Focus on Quantities
- Pathway to the Evaluation of Options for the final disposal
- Framework for Public Participation

The year 2021 was reflected upon and an outlook for the year 2022 was given.

In the fourth meeting on 11 and 12 May 2022, the aim was to derive initial recommendations from the report on the quantities of radioactive waste in Austria, to clarify the proce-

cedure for further developing the timetable and roadmap (mandate item 4) and to commission studies on the possible options for the final disposal (mandate item 2). With regard to the topic of public participation (mandate item 3), the aim was to coordinate the process for developing the framework for the participation concept, based on a common understanding of transparency and participation. In addition, the work of the Advisory Board during the first year was reflected upon and the roadmap for the next two years was discussed.

At the fourth meeting the inventory of radioactive waste in Austria was presented by Nuclear Engineering Seibersdorf GmbH and discussed with the Advisory Board.

In its January 2022 meeting, the Advisory Board identified the need for several studies. The Secretariat then presented details on what the content of studies could be. The following five studies, covering all the topics discussed at the previous meeting, are to be carried out:

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

The Committee on the “Framework for Public Participation” presented its reflections on the principles of transparency and the procedure for drawing up the concept of participation at the fourth meeting.

Regarding mandate item 4 "Development of a Timetable for the Disposal of Radioactive Waste ", the need for more detailed background information was expressed at the fourth meeting.

In the fifth meeting on 19 and 20 October 2022, the objectives were to give initial recommendations based on the results of the study for the inventory (mandate item 1), to agree on the further procedure and clarify open questions about the legal framework (mandate item 2). In addition, the aim was to define the study design on the level of knowledge and understanding of the public and to continue to develop the participation concept (mandate item 3), as well as to discuss current work on the timetable and roadmap (mandate item 4) and to determine next steps.

Nuclear Engineering Seibersdorf GmbH had prepared an inventory of the radioactive waste in Austria for the Advisory Board and made some additions based on the discussion at the fourth meeting. These were presented and discussed at the meeting. Recommendations were developed by the Committee on mandate item 1 and added to in the course of the discussion with the Advisory Board.

The Advisory Board agreed that the preliminary recommendations would be documented and the Committee would continue to exist. The Committee will continue to monitor the subject of the "quantity of radioactive waste in Austria" and will work on the recommendations for the final report next year.

The interim results of the study on the legal framework were presented and discussed at the fifth meeting by two representatives from the Institute for Environmental Law at the Johannes Kepler University in Linz.

At the fifth meeting, the Committee on the "Framework for Public Participation" presented the current status of the participation concept. In addition, the research design for the study on the level of knowledge and understanding of the public was presented by the Environment Agency Austria.

The Secretariat prepared a draft for the timetable and roadmap. This was presented and discussed during the fifth meeting. The Advisory Board decided on the following next steps: the results of the discussion from the fifth meeting would be incorporated into the timetable and roadmap. The results of the study on the legal framework would be taken into account as far as possible in coordination with the "Timetable and Roadmap" Committee. In addition, the open points of the timetable and roadmap would be prepared for the next Advisory Board meeting.



## 2.2 Decisions of the Advisory Board

All resolutions of the Advisory Board were passed unanimously.

### Mandate Item 1

At the third meeting it was decided to draw up an inventory of radioactive waste in Austria. The Advisory Board recommended that the Secretariat contact Nuclear Engineering Seibersdorf GmbH for this purpose.

### Mandate Item 2

In the third meeting, the need for basic information was expressed as an essential prerequisite for future recommendations. The following requirements were mentioned in the proposal for a resolution:

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

### Mandate Item 3

In the third meeting, the Committee on the “Framework for Public Participation” presented a theoretical framework to be used for the conception of public participation. In the interest of transparency, proposals on the future development of the website and future measures for communication and public relations 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 assessments was discussed as an additional option. Both options would create an evidence-based starting point for designing a participation concept. During the third meeting, it was decided that the Committee should develop a design for the study and a proposal for possible events.

During the fourth meeting, the Advisory Board decided to prepare a study that provides initial insights into the level of knowledge and understanding of the public with 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.

In addition, a draft resolution on the understanding of transparency and the procedure for creating the participation concept was adopted 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 to 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;
- 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).

During the fifth meeting, the Advisory Board welcomes the fact that representatives of civil society are organising a first meeting with NGOs. The results of this meeting will be presented to the Advisory Board.

#### **Mandate Item 4**

During the fourth meeting, the Advisory Board decided to have a decision tree drawn up. The Advisory Board recommended that the Secretariat take over the further processing of the decision tree. The decision tree developed was 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 was to be prepared in which the steps and decisions noted as points in the table are comprehensively explained. The first results were to be presented at the fifth meeting.

At the fifth meeting the Advisory Board agreed to set up a Committee on the "Timetable and Roadmap". The tasks of the Committee include the evaluation of ongoing additions, suggestions, and unresolved issues for the Advisory Board, as well as the development of recommendations.

### **2.3 Webinar**

Since the beginning of 2022, the Secretariat has been organising monthly webinars for the Advisory Board. These webinars are intended to provide background information for the members of the Advisory Board. The topics are very wide-ranging. The speakers are both members of the Advisory Board and external experts.

The first webinar was held on 17 March 2022 by Dr. Verena Ehold (BMK) on the subject of "Legal Framework Conditions". She gave an overview of international conventions and EU legal obligations. She also presented the national framework based on Austrian Radiation Protection Law and the "The National Programme for the Management of Radioactive Waste".

The second webinar took place on 30 March 2022. Stefan Mayer (IAEA) gave a presentation on the topic of "Creation of a Timetable and Roadmap". In it he presented a generic roadmap with key points. In addition, a number of other countries' timetables were considered.

The topic of the third webinar on 26 April 2022 was "ERDO and Dual Track Policy". Ewoud Verhoef (ERDO) and Patricia Lorenz (Global 2000) gave presentations. In these, the ERDO association was introduced and the "Dual Track Policy" explained using the example of the Netherlands. The ERDO association is a group of national radioactive waste management organizations which discuss the possibility of joint storage of radioactive waste and cooperation in the management of the same. There is also talk of the so-called "dual track policy", in which the plan of a national and an international repository is pursued at the same time. In addition, the uncertainties and obstacles of a "dual track policy" were highlighted in this webinar.

The topic of the fourth webinar on 24 May 2022 was "Basics of Radioactivity and Radiation Protection". Dr. Johannes Sterba (Vienna University of Technology) explained the different types of radiation, the terms activity and dose and described the use of ionizing radiation.

The fifth webinar on "Clearance of Radioactive Materials" was held on 27 July 2022 by DI Fabian Rechberger (AGES). He described the procedure for the clearance of radioactive materials in Austria. He also reported on the interaction between NES, the experts, and the Authority.

Dr. Roland Ferth (BMK) held the sixth webinar on 24 August 2022. The theme was "Disposal of Conventional Waste". The webinar presented the Federal Waste Management Plan 2022, as well as an overview of Austrian waste management and the procedure for approving landfills in Austria.

The seventh webinar on "Changes in the National Programme for the Management of Radioactive Waste " was held on 28 September 2022 by DI Roman Zöchling (BMK). In it, he

presented the changes to the National Programme for the Management of Radioactive Waste and informed the listeners about the current status of the infringement procedure. He also shared information on the ARTEMIS mission that took place in Austria between the 20th and 30th of November 2022.

On 25 October 2022, the eighth webinar entitled "MKG, the Swedish NGO Office for Nuclear Waste Review" took place. Johan Swan (MKG) presented his Swedish NGO and reported on its financing.

The last, ninth, webinar of 2022 with the topic "Climate Council" took place on 30 November 2022. Mag. Dieter Beisteiner (BMK) and Georg Tappeiner (Pulswerk) reported on how the Austrian Climate Council was organized and set up.

The 2022 webinars were very well received and described as an enriching experience. A continuation of the webinars in 2023 is planned.

## 2.4 Excursions

### Germany

The first excursion of the Advisory Board went to Salzgitter in Germany, where a delegation visited the mine shaft „Konrad“. This shaft, a former ore mine, is currently converted into a repository for low- and intermediate-level radioactive waste. The excursion took place from the 13th until the 15th of June 2022. In total, the delegation consisted of ten participants. In addition to the tour of the mine shaft, talks with the repository operator (BGE) and the local NGO were also on the agenda.

Image 2: The participants of the excursion inside the mine shaft „Konrad“



(Photo: BGE)

## France

On the 5th and 6th of September 2022, a delegation from the Advisory Board visited France. In the Aube department, the seven participants visited the near-surface repository for low- and intermediate-level radioactive waste (CSA) and the repository for very low-level radioactive waste (CIRES). Conversations were also held with the authorities (ANDRA) and the local CLI (Commission Locale d'Information).

Image 3: The participants of the excursion with the representatives of CLI and ANDRA



(Photo: Henriette Herzog)

## 2.5 Studies Commissioned by the Advisory Board

In the third and fourth meeting, the Advisory Board's need for several studies was expressed. For this reason, several studies were commissioned in 2022.

The study on the **"Inventory of Radioactive Waste"** provides a detailed list of the type and origin of Austrian radioactive waste. In addition, a prognosis of future radioactive waste in Austria is given. The study was conducted by Nuclear Engineering Seibersdorf GmbH.

The study on the **"Legal Framework for the Disposal of Radioactive Waste"** is currently being carried out by the University of Linz, Institute for Environmental Law. The study presents the international and European regulations for disposal and the national legal situation.

The report on **"Methods for Estimating the Long-Term Behaviour and Dispersion of Radionuclides in the Vicinity of a Possible Disposal Site"** is intended to present the scientific and technical methods for calculating and estimating the long-term behaviour of radioactive material in the repository and their reliability, as well as the calculation methods for the dispersion of radioactive materials. The study is currently being carried out by the University of Vienna, Institute for Isotope Physics, and AGES.

The report on a **"Proposal for Safety Criteria and Accident Scenarios"** is under preparation. It is being developed jointly by the University of Natural Resources and Life Sciences's „Institute of Safety and Risk Sciences“, the Technical University of Vienna's „Atomic and Subatomic Physics -TRIGA, Center for Labelling and Isotope Production“, Nuclear Engineering Seibersdorf GmbH and AGES. The purpose of the report is to draw up proposals for criteria to guarantee, in particular, the radiological safety of the repository and thus the requirements for the safety characteristics of the repository according to the current state of the art in science and technology (safety criteria). The safety criteria should also cover the possible accident scenarios that are typical for a repository. The repository types to be considered must account for these accident scenarios in their design.

The Environment Agency Austria is conducting an exploratory study entitled **“Austria and its Radioactive Waste – What you always wanted to know and what we always wanted to ask you”**. The aim of this study is to gain insights into the views and opinion-forming process of different people in Austria regarding radioactive waste. For this purpose, focus groups are formed in different cities, in which participants are questioned about the topic of radioactive waste.

The last report, commissioned in 2022, is entitled **“Comparison of Options for Final Repositories”**. It is prepared by the Öko-Institut e.V., Institute for Applied Ecology, Germany. The report is intended to present today's available options for repository technology. It shall



discuss the advantages and disadvantages of the different options using defined safety criteria for evaluation and assessing the expected relative costs of the addressed disposal options.

# 3 Publications and Public Relations

The Advisory Board's website [www.entsorgungsbeirat.gv.at](http://www.entsorgungsbeirat.gv.at) was set up. The website serves to inform the public and also publishes minutes of meetings and annual activity reports. It offers the possibility of contacting the Advisory Board. For this purpose, the e-mail address [kontakt@entsorgungsbeirat.gv.at](mailto:kontakt@entsorgungsbeirat.gv.at) is available, through which interested persons from the public can ask questions and present their concerns.

During the reporting period, three meeting reports were published on the website:

- Report of the third meeting
- Report of the fourth meeting
- Report of the fifth meeting

In addition, the first activity report for 2021 was published.

There were no recommendations or other publications from the Advisory Board in the reporting period. The results of the studies commissioned for the Advisory Board will be published at the end of the mandate, in summer 2024, together with the final report.

## 4 Personnel Changes

In 2022 the following personnel changes occurred in the chairmanship and the members:

Gerhard Seifritz was nominated as a representative of the Federal States by the Office of the Lower Austrian State Government following the resignation of one member.

Angelika Spieth-Achtnich from the Öko-Institut e.V., Institute for Applied Ecology (Germany) was appointed by Federal Minister Leonore Gewessler after Wolfgang Renneberg left.

Following the resignation of Andrea Prutsch, the chair is supported by Sabine Kranzl from the Environment Agency Austria.

# 5 Outlook

The meeting dates for 2023 have already been set. The meetings shall take place on:

- 1 and 2 February 2023 (sixth meeting)
- 10 and 11 May 2023 (seventh meeting)
- 20 and 21 September 2023 (eighth meeting)

In 2023, the study results will be discussed and the first recommendations for the Federal Government will be drawn up.

Excursions to existing European repositories for low- and intermediate-level radioactive waste are also planned.

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## List of Abbreviations

AGES	Austrian Agency for Health and Food Safety GmbH
ANDRA	Agence Nationale pour la Gestion des Déchets Radioactifs
BGE	Federal company for radioactive waste disposal, Germany
BMK	Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology
CIRES	Le Centre Industriel de Regroupement, d'Entreposage et de Stockage
CLI	Commission Locale d'Information
CSA	Centre de stockage de l'Aube
DI	Diplom-Ingenieur / Diplom-Ingenieurin
Dr	Doktor / Doktorin
e.V.	Registered Association
IAEO	International Atomic Energy Agency
Mag	Magister / Magistra
MKG	Miljøorganisationernas karnavfallsgranskning
NEP	The National Programme for the Management of Radioactive Waste
NES	Nuclear Engineering Seibersdorf GmbH
NGO	Non-governmental organization
SUP	Strategic Environmental Assessment
TU Wien	Technical University of Vienna

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