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RADIOACTIVE
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Selection of a site for the deep geological repository

The main criterion relating to the planned deep geological repository (DGR) concerns long-term safety, which must be ensured for a period of hundreds of thousands of years. Therefore, particular attention is being devoted to the selection of a suitable site for the facility. As far as the Czech Republic is concerned, it is planned that the DGR will be constructed in a suitable crystalline rock mass. Nine potential sites were originally selected for consideration, all of which were subjected to detailed assessment via the conducting of comprehensive geological surveys.

The development of the DGR is an extremely long-term project, in which both the selection of the optimal site for the DGR and ensuring the maximum level of safety over hundreds of thousands of years comprise crucial factors.

The Czech Radioactive Waste and Spent Nuclear Fuel Management Concept (the Concept) sets out the requirements for the selection of a final DGR site by 2025, the commencement of the construction of the DGR by 2050 and the start of operation of the facility in 2065.

The DGR site assessment process was preceded by the extensive collection and evaluation of the relevant data covering the detailed description and assessment of local conditions. In recent years, SÚRAO has conducted a huge amount of research at the sites via e.g. field research, terrain reconnaissance, sampling, the monitoring of dust levels and the occurrence of radon, the measurement of seismic phenomena and the remote sensing of the Earth using images from satellites and aircraft. As a result

of the geological, hydrogeological and other research, 3D geoscientific models of the rock conditions were created, based on which the sites were assessed.

In addition to the collection of geological data, various social scientific issues have been addressed at the sites. However, at this stage these issues are not being considered in the site selection process. The research included the assessment of how residents view potential investment in their areas and the impacts on employment, local businesses and the local infrastructure and other important regional factors.

The following documents on each site form the basis for the site assessment process:

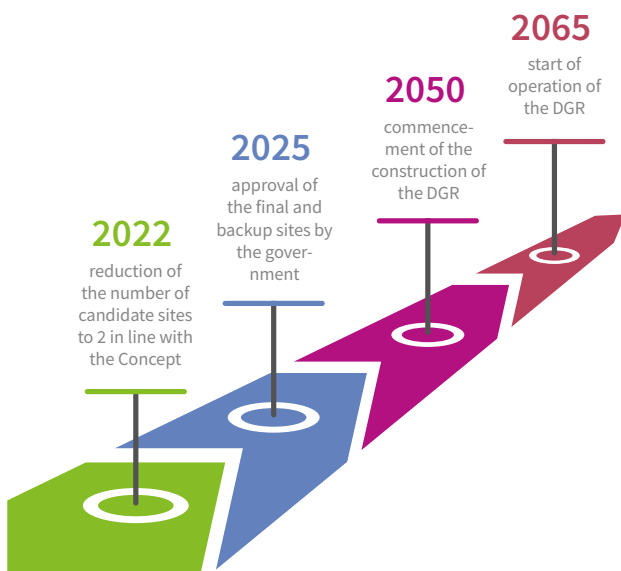
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| safety study |
| feasibility study |
| environmental impact study |

The nine sites were compared based on the above documents, following which, on 21 December 2020, the government approved the selection of four recommended DGR sites – Březový potok, Horka, Hrádek and Janoch. Further detailed research and exploration work will be conducted at these sites aimed at the eventual selection of the final and backup sites.

The final decision on the further reduction in the number of sites will be made by the Government of the Czech Republic.

The next site selection stage will focus on obtaining the relevant knowledge from the expected depth of the repository and the evaluation of the various findings so as to determine the final and backup DGR sites. **SÚRAO aims to meet the deadline set by the Concept, i.e. 2025. However, obtaining the relevant data from DGR depth is dependent not only on the various technical considerations, but also on ensuring so-called survey area status for the affected sites.** Experience to date indicates that procedural issues comprise a key factor in terms of fulfilling the various milestones set out in the Concept.

The final site will subsequently be subjected to a detailed geological survey and the data obtained will be used to demonstrate the fulfilment of



safety requirements and, thus, to demonstrate that the selected site is suitable for the location of the DGR. The backup site will be held in reserve in the case of the occurrence of unforeseen events concerning the detailed characterisation of the final site.

Public involvement

It is clear from other countries with DGR development programmes that it is not possible to simply determine a suitable geological environment and then decide to construct the repository without the approval of local residents. The appropriate geology and the interplay of the various features of the site must be accompanied by acceptance on the side of the public concerned. Therefore, SÚRAO considers direct communication with the inhabitants of the various candidate sites to be crucial. Where possible, the involvement of local municipalities in the DGR process exceeds the limits of existing legislation. Moreover, SÚRAO fully supports both the efforts of municipalities to strengthen their legal status with respect to DGR issues and calls for the closer involvement of municipalities in the next stage of research aimed at selecting the final site for the DGR.

With respect to SÚRAO's operational repositories, i.e. Richard (near Litoměřice), Dukovany and Bratrství (near Jáchymov), so-called civil control committees have been set up with the aim of enhancing communication with local inhabitants via the establishment of local information centres, the distribution of informational materials and regular meetings with local civic representatives, some of which are held on a regular basis (Richard and Bratrství civil control committees and the Dukovany civil safety committee) and others at the request of local councils. The reason for the establishment of these committees was to strengthen the degree of mutual trust between local inhabitants and SÚRAO. The members of the committees comprise representatives of the affected and surrounding municipalities and specialists from SÚRAO and the Czech Mining Authority.

SÚRAO organises on an annual basis expert visits for representatives of the affected municipalities and the public to domestic and foreign facilities that are involved in the issue of radioactive waste, e.g. nuclear power plants, the Bukov Underground Research Facility and, primarily, radioactive waste repositories.

SÚRAO's main aim is to maintain and enhance mutual trust, understanding and respect between SÚRAO and the public via an approach that emphasises social responsibility.



The affected municipalities are entitled to financial contributions from the nuclear account

The most recent version of the Atomic Act, in force since the beginning of 2017, provided affected municipalities with a substantial increase in the financial contributions they receive from the nuclear account.

The new regulations concerned principally contributions to those municipalities in whose cadastral areas so-called exploration areas for intervention into the Earth's crust have been determined (i.e. areas in which SÚRAO-commissioned geological survey research is underway), as well as those municipalities in whose cadastral areas currently operational radioactive waste repositories are located.

Financial contributions according to the Atomic Act No. 263/2016 Coll. and Government Regulation No. 35/2017 Coll.

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| municipalities in whose cadastral areas exploration areas have been defined | CZK 600,000 per year, and CZK 0.40 per year for each m² of the cadastral area of the municipality defined as an exploration area | 2020–2025 |
| municipalities in whose cadastral areas protected areas have been defined | CZK 50 000 000 one-off payment | 2026 |
| municipalities in whose cadastral areas special protected areas have been defined | CZK 600,000 per year, and CZK 0.60 per year for each m² of the cadastral area of the municipality defined as a special protected area | 2027–2064 |
| municipalities in whose cadastral areas the operation of a radioactive waste repository is permitted | CZK 4,000,000 per year and CZK 10,000 for each m³ of radioactive waste disposed of in a given year | 2065– |



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