REPUBLIC OF ESTONIA
MINISTRY OF CLIMATE

To the Point of Contact for the Espoo Convention in Finland, Sweden, Denmark, Germany, Poland, Lithuania and Latvia

Our ref 19.06.2024 6-3/24/3050

Updated information regarding the spatial plan for the final storage site of radioactive waste in Estonia

On 12 May 2023, Estonia informed (letter no 6-3/23/2029) its neighbouring countries regarding the municipal designated spatial plan and strategic environmental assessment (SEA) procedure for the final storage site of radioactive waste in Estonia. Hereby the Ministry of Climate would like to provide updated information.

On 4 July 2019, the Government of the Republic of Estonia obliged the Ministry of the Environment (since 1 July 2023 Ministry of Climate) to apply to the Lääne-Harju Municipality Government for initiating a municipal designated spatial plan and its SEA for the establishment of a final storage facility for radioactive waste. Lääne-Harju Rural Municipality Council initiated the spatial planning and SEA on 28 January 2020. The purpose of establishing the final storage facility is to ensure safe storage of radioactive waste currently located in Paldiski in Lääne-Harju rural municipality even for thousands of years. The existing temporary storage facility for radioactive waste is not suitable for the final storage of radioactive waste and therefore, a facility that meets the requirements for final storage needs to be constructed.

According to the Planning Act[1] the municipal designated spatial plan procedure consists of two main stages: pre-selection of the location, i.e. the selection of the most suitable location for the planned construction work, and thereafter detailed solution, which determines the building rights of the envisaged construction work in terms of the selected location and solves other relevant tasks. Both stages include the preparation of a SEA report, respectively the report concerning the first stage of the SEA of the plan and thereafter the SEA report of the detailed solution of the plan.

On 12 March 2024, Lääne-Harju Municipality Council approved the resolution on pre-selecting a location for the municipal designated spatial plan for the final storage site of radioactive waste and the report concerning the first stage of SEA. When choosing the location for the final storage site of radioactive waste, three location alternatives have been considered in Lääne-Harju municipality: Paldiski, Altküla and Pedase. To summarize the comparison of alternatives, it was concluded that considering the impact assessment topics the most suitable site for the final storage site is Paldiski.

During the pre-selection of the location a study about significant transboundary environmental impacts to neighbouring countries has been carried out. The study was based on modelling

[1] Planning Act https://www.riigiteataja.ee/en/eli/ee/515032023002/consolide/current#para95

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the transmission of radionuclides from potential final storage site to the marine environment (Gulf of Finland) and areas adjacent to the Gulf of Finland. The model was applied to simulate the transfer of radioactivity in the marine environment and to humans through contamination of the marine food chain. According to the modelling results (see more in Annex 1), radiation protection limits are not exceeded and the establishment of the proposed final storage site in any alternative location does not have a significant negative impact on neighbouring countries.

During the transboundary consultations on the Estonian National Radiation Safety Development Plan 2018-2027, the National Radon Action Plan and the National Action Plan for Radioactive Waste Management that were held in 2019, Finland and Sweden indicated that they wanted to be involved in the follow-up activities of the development plan. Latvia asked to be informed if the final storage site for the decommissioning of the nuclear site in Paldiski is changed to a site that is closer to the common border.

Therefore, Estonia will notify Finland and Sweden at the stage of detailed solution of the municipal designated spatial plan for the final storage site of radioactive waste in Estonia and the SEA report presumably in the coming years. However, if based on the study about significant transboundary environmental impacts to neighbouring countries (Annex 1) Finland or Sweden do not consider it necessary to be notified regarding the spatial plan, please inform us by 19 August 2024 (e-mail: info@kliimaministeerium.ee).

We also kindly ask Denmark, Germany, Poland, Lithuania and Latvia to inform by 19 August 2024 (e-mail: info@kliimaministeerium.ee) if they would like to be notified about the spatial plan in question, considering the enclosed study.

More information about the spatial plan for the final storage site of radioactive waste can be found on the website of Lääne-Harju Rural Municipality https://laaneharju.ee/radioaktiivsete-jaatmete-loppladustuspaiga-kavandamine (in Estonian). The studies that have been carried out can be found on the project website https://alara.ee/projektid/rajala/uuringud-kuni-2023/uuringud-2021-2023/.

Basic research studies were divided into five activities, which in turn consisted of several sub-activities:

- Activity 1. Identifying the three most optimal locations for the final storage site[2]
- Activity 2. Investigations of the three locations of the final storage site[3]
- Activity 3. Comparison of the locations of the final storage place[4]
- Activity 4. Research on liquidation (decommissioning) of reactor sections[5]
- Activity 5. Comparison of reactor section decommissioning alternatives. Activities related to the most suitable alternative for decommissioning reactor sections[6]

Additional studies included scanning of the reactor sections with the cosmic muon radiation, which is novel technique on this field:

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[2] Study report in English https://alara.ee/wp-content/uploads/2023/08/koduleht-uuringud-tegevus-1-ingliskeelne-vahearuanne.pdf

[3] Study report in English https://alara.ee/wp-content/uploads/2024/01/koduleht-uuringud-tegevus-2-ingliskeelne-vahearuanne.pdf

[4] Study report in English https://alara.ee/wp-content/uploads/2024/01/koduleht-uuringud-tegevus-3-ingliskeelne-vahearuanne.pdf

[5] Study report in English https://alara.ee/wp-content/uploads/2024/01/koduleht-uuringud-tegevus-4-ingliskeelne-vahearuanne-1.pdf

[6] Study report in English https://alara.ee/wp-content/uploads/2024/01/koduleht-uuringud-tegevus-5-ingliskeelne-vahearuanne.pdf

- First report in English: “The development of unique detectors for mapping the locations of the disused sealed radiation sources and radioactive waste placed in the reactor compartments and then covered with concrete.”[7]
- Second report in English “Mapping the disused sealed radioactive sources and radioactive waste placed in reactor compartments and then covered with concrete in the concrete mass.”[8]

Sincerely Yours,

/Signed digitally/

Birgit Parmas
Point of Contact for the Espoo Convention

Enclosure:
Annex 1 – Studies Necessary for the Establishment of the Radioactive Waste Repository. Activity 2. Studies of the three repository locations. Sub-activity 2.19. Possible impact of the repository on neighbouring countries. Interim Report, 2023.

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[7] Study report in English https://alara.ee/wp-content/uploads/2023/08/koduleht-lisauuringud-tegevus-1-ingliskeelne-aruanne-1.pdf
[8] Study report in English https://alara.ee/wp-content/uploads/2024/01/koduleht-lisauuringud-tegevus-2-ingliskeelne-aruanne.pdf