

# STEPS Students Report

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The title of my research is "Overview of potential issues in comparison of final disposal and temporary storages of radioactive waste. In this research attention was paid to several aspects of the problem of isolation of radioactive waste in Russia. In spite of the IAEA's recommendations and the adoption of the law declaring the obligation to bury radioactive waste in the geological repositories, the interim storages are still most widely used in Russia. But there are a few projects of geological disposal of radioactive waste. The key issue is that local citizens, living in areas potentially suitable for implementation of such kind of projects, don't accept the projects. So, it is crucial to identify the most urgent issues that hinder the creation of the geological repositories in real conditions.

This problem is urgent not only in Russia: a lot of countries meet strong opposition at the first steps of implementation of repositories. The conflict situation in Leningrad region is a good reflection of the typical situation that takes place during implementation the repository project. This research is based on the international experience in this field.

In this research a comparison analysis was made for Russian geological disposal project and the ordinary interim storage facility in the Leningrad region to find out the most important factors impact to implementation of each project.

In my research there were essential to solve the following tasks:

- Reveal the most conflicting common situations, that have occurred in countries during the implementation of radioactive waste repositories
- Turn these situations into criteria for a comparison analysis of repository implementation processes in the considered countries.
- Using these criteria carry out the comprehensive comparison of storages and burial facilities

Four countries (Japan, South Korea, France and Sweden) were chosen in which a search was carried out for conflict situations during the implementation of the geological repository projects (in case of France it was the underground research laboratory). During this research 21 technical and 9 social criteria were considered.

There were found the most conflict issues that usually happened in countries during implementation the radioactive waste repository facility. Then, on the basis of the analysis of

the issues mentioned above the most urgent criteria have been revealed. By means of these criteria the comparison analysis of temporary storage and final disposal was provided, using the projects in Leningrad region. This approach shows the sides of process of realization of radioactive waste disposal project that are require the closest attention from experts.

According analysis the implementation of both projects will has some difficulties. The implementation of geological repository from social viewpoint is harder that interim storage. But from technical viewpoint the project of repository is more effective. So, in case of Leningrad region the most important problem specialist faced during implementation - the social negative attitude. This comparison analysis is demonstrating how strong social issues can affected by implementation of the geological repository. In this situation are recommended pay attention to social issues the same way like technical. For example, government always should think about compensation for citizens, about mass education work regarding radioactive waste disposal, about ways to improve the transparent and democratic way to interact with people for create the effective and modern radioactive waste management system.