



## 10 years of cooperation between NRPA and regulatory authorities in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan

The Norwegian Radiation Protection Authority has successively cooperated with its sister organizations in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan for over 10 years in relation to regulatory enhancement for nuclear safety and radiation protection.



**Fig 1 Several meetings between NRPA and cooperating regulatory bodies and Technical Support Center's (TSO) 2008-2016**

After the collapse of the Soviet Union, the majority of sites for the extraction and processing of uranium ore in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan were closed either completely or partially. Most of these sites had been productive for years which resulted in the creation of large areas of nuclear legacy. A lack of proper handling and effective regulatory systems in relation to this legacy poses serious risks to the people and environment of these countries.

The NRPA, based on previous experience gained in cooperation with Russian regulators regarding the enhancement of regulatory infrastructure pertaining to different legacy objects (Lepse) and sites (Andreeva Bay), initiated a regulatory cooperation program in Central Asia.

Initial discussions and meetings took place in 2008 and resulted in the signing of a joint Memorandum of Understanding (MoU) by Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan and implementing the program.



**Fig. 2 Signing the joint MoU in 2009**

For the initial three year period, the NRPA assisted the regulatory authorities of Kazakhstan, Tajikistan, Kyrgyzstan and Uzbekistan in the development of threat assessment reports which identified the weaknesses in the extant regulatory system that were to be addressed along with identification of the regulatory documents, required for radioactive waste management in each country.



**Fig. 3. NRPA Reports on regulatory cooperation program in Central Asia**

Risk assessment reports indicated that the regulatory basis for management of wastes from the former uranium production industry had not been fully completed and required improvement and harmonization with the IAEA Safety Standards and other international recommendations on good practices.

The regulatory cooperation program is based, in large part, on discussions with all interested parties. A significant role is played by the sharing of information between all involved countries during the preparation and review of draft documents.

The most important step was the improvement of existing regulations, including the development of new laws on radioactive waste management, in Kazakhstan, Tajikistan, Kyrgyzstan and Uzbekistan. The drafted documents took account of current needs and local specificities and the content therefore differed from country to country.

The NRPA promotes and supports cooperation including wider international discussions within different fora including all participating countries and invited Western experts. This exchange of information and the joint meetings improves the review process and provides a better understanding of the problems to be solved.

Between 2008 and 2015, 24 regulatory documents were developed in total, some of which have already been approved and introduced into the legal and regulatory frameworks of the countries. Results of the work were published and documented in NRPA Reports.

The regulatory cooperation program has substantially enhanced the regulatory documents and procedures necessary to address legacy situations in Central Asia. This was possible by maintaining a long-term strategy over many years, coupled with trusting working relationships and openness and transparency.

The next stage of cooperation will focus on updating of the risk assessment reports in each of the countries and analysis of the changes in the regulatory systems and legal situation, which have taken place in the last 10 years and will be focused on supporting the practical implementation of the documents. It will also help to design the road map for further cooperation.

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**Fig. 4 Number of documents developed under regulatory cooperation program**