

### Lead Nations



Germany

### Other Contributors



Luxembourg



Switzerland



United States

### Milestones

- 9 June 2009 – Ukraine sent Request for Assistance to NATO
- 11-15 April 2011 – NATO SME perform prefeasibility study
- 13 December 2011 – PCSC in NUC format agreed Germany to be the lead nation
- 20 December 2011 – Executing Agent Agreement between Germany and NSPA
- 17 June 2015 – Ratification of the legal framework by the Verhovna Rada of Ukraine
- 5 October 2015 – Presentation of final project proposal to PCSC in NUC format
- 1 January 2016 – Start of project implementation
- 29 December 2016 – End of project implementation
- 13/14 February 2017 – Project closing ceremony

### Financial information

- Estimated budget 950 KEUR
- Project budget 850 KEUR

### Background

Significant quantities of radioactive waste were buried by the Armed Forces of the Former Soviet Union between 1960 and 1990 across Ukraine that are now under the responsibility of Ukrainian Ministry of Defence or State Border Guard Service (SBGS).

Preliminary assessments indicated that this waste contains Cobalt ( $^{60}\text{Co}$ ), Cesium ( $^{137}\text{Cs}$ ), Strontium ( $^{90}\text{Sr}$ ) and Plutonium ( $^{239}\text{Pu}$ ) sources as well as radiation sources with fast neutron (possibly Pu-Be). Exact dimensions, nature and attributes of these sources and extent of contamination (if so) at the burial sites were unknown. Additionally, there was a proliferation risk with these sources.

Ukraine requested support for the remediation of radioactive waste located in Vakulenchuk, a site under control of the

SBGS of Ukraine, in a manner that protects human health and the environment now and in the future without imposing undue burdens on future generations. The NATO Trust Fund project supported Ukraine through a three work package project over a 12 month period. The NATO Trust fund project was managed in accordance with applicable national standards and regulations. Once the radioactive waste was retrieved and extracted, conditioned and packed for transportation to Kyiv RADON, the project supported the site's restoration to its original condition subsequent to cessation of operation in order to prevent further environmental degradation and destruction. As a cooperation theme and best practice, the project used Allies and Partner Subject Matter Experts with competences in radioactive waste treatment.

The project final cost was EUR 848,000 over 12 months.

## Objectives & Achievements

### Work Package 1 – Radiation Survey and Site Investigation

From February till May 2016, a well-planned characterization of the site was undertaken during the Radiation Survey and Site Investigation. Through a historical site investigation followed by a radiological and an environmental survey, reliable and suitable data was obtained regarding the distribution and physical, chemical and nuclear properties of all radioactive contaminants to determine the extent of the contamination. Recommendations for the work of the following work packages of this NATO Trust Fund to be executed were provided by means of a Status Survey Report.



### Work Package 2 – Pretreatment of Waste

The project supported the implementation of a Technical Solution proposed by the contractor coordinated with SBGS and approved by the State Nuclear Regulatory Inspectorate of Ukraine (SNRIU). Support was given to the retrieval, the extraction, the conditioning and packaging and for the transport of the Radioactive Waste (RW) from the contaminated site at Vakulenchuk to an authorised regional interim storage managed by the “Ukraine Regional Radon Specialized Plant” at Kyiv, known as the State Specialized Enterprise “Kyiv State Interregional Specialized Combine”.



### Work Package 3 – Site Restoration

The project restored the site to its original condition subsequent to cessation of pretreatment of radioactive waste operations in order to prevent further environmental degradation.



**For further information**

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