

## Lead Nations



Germany

## Other Contributors



Norway

## Background

### Introduction

This proposal has been prepared by the NATO Support and Procurement Agency (NSPA) in close consultation with the appropriate authorities in Ukraine and with reference to relevant desk studies. It reflects discussions and agreements from visits to Kiev conducted throughout 2011 and a series of Subject Matter Experts' (SMEs) technical reports from NATO Science for Peace and Security (SPS). The remediation of Tsybuleve follows the successful remediation of a contaminated site in Vakulenchuk completed in 2016 under the leadership of the Federal Republic of Germany.

As a result of the 2014 Ukraine crisis, Allies decided to intensify cooperation with Ukraine in the framework of the NATO-Ukraine Distinctive Partnership at the meeting of the North Atlantic Council on 5 March 2014. Foreign Ministers agreed on Measures to Support Ukraine in the Framework of the Distinctive Partnership on 1 April 2014. This project was also part of NATO's Comprehensive Assistance Package for Ukraine, approved by Ministers of Defence of the NATO-Ukraine Commission on 15 June 2016 and endorsed at the NATO Summit in Warsaw on 9 July 2016.

### Aim

The aim of the project is to deal with radioactive waste located in the Kirovograd region near the village of Tsybuleve, a site under the control of the Ministry of Defence (MoD) of Ukraine, with a view to protecting human health and the environment now and in the future without imposing undue burdens on future generations.

### Proposal

Significant quantities of radioactive waste were buried by the Armed Forces of the former Soviet Union between 1960 and 1990 in locations across Ukraine that are now the responsibility of the Ukrainian Ministry of Defence. Preliminary assessments have indicated that this buried waste contains Cobalt ( $^{60}\text{Co}$ ), Cesium ( $^{137}\text{Cs}$ ), Strontium ( $^{90}\text{Sr}$ ) and Plutonium

### Milestones

- 28 November 2017 – Presentation of final project proposal to PCSC in NUC format
- 11 December 2017 - Amendment to Executing Agent Agreement between Germany and NSPA to include the project in Tsubuleve
- 2 July 2018 - Amendment to Executing Agent Agreement between Germany and NSPA to start implementation
- 1 August 2018 - Start of project implementation

### Financial information

- The total forecasted cost is 1.5 MEUR over 18 months
- The financial threshold of 200,000 EUR has been reached
- Current contributions are at 1.3 MEUR.

( $^{239}\text{Pu}$ ) sources as well as sources of fast neutron radiation (possibly Pu-Be) (dose rate reaches up to 2000 mR/h)

Risks of proliferation as well as risks to human health and the environment have been assessed. The storage conditions of the repository do not comply with the requirements set forth in Ukrainian legislation and regulations nor does it fulfil the international standards for disposal of waste containing radioactive sources. National competent authorities must ensure that radioactive waste (RW) can be kept safely and securely without risk of loss, theft or accident, while also preventing radioactive contamination, over very long time periods.

Effective RW management includes conditioning the sources, checking the status of the sources regularly, providing proper security measures for the repository, and keeping records of all transactions. There is neither the necessary infrastructure nor trained personnel to handle these radiological safety and security requirements.

The project will support Ukraine through 3 work packages (WP), to be consecutively implemented over an 18-month period:

- WP 1 – Radiation Survey and Site Investigation.
- WP 2 – Pretreatment of Waste.
- WP 3 – Site Restoration.

### Outcomes

The expected outcomes of the project are:

- to ensure that RW is securely kept without risk of loss, theft or accident, while also preventing radioactive contamination;
- to effectively manage RW including conditioning, transporting, storing and disposing of RW while providing proper security measures;
- to protect people and the environment from the harmful effects of radiation.

## Financial Estimates

The maximum total cost of the project is estimated at EUR 1,500,000. It is proposed to implement the project across 18 months. The financial threshold of 200,000 EUR was reached. This enabled to start the project implementation.

## Conclusion

Support to Ukraine will:

- reduce the possibility of malicious intervention such as theft or sabotage by effectively managing RW through removal to authorised regional interim storage;
- improve the condition of radiation safety to protect people and the environment from the harmful effects of radiation.

## Objectives & Achievements



### WP 1 – Radiation Survey and Site Investigation

Through a historical site investigation followed by a radiological and an environmental survey, the project will deliver a Status Survey Report to provide recommendations for the work to be executed during the follow-on work packages of this project.



### WP 2 – Pretreatment of Waste

The project will support the implementation of a Technical Solution (TS) proposed by a contractor coordinated with the Ministry of Defence (MoD). Support will be given to the retrieval, extraction, conditioning and packaging of the radioactive waste and its transportation from the location to an authorised regional interim storage site managed by the Ukraine Regional Radon Specialized Plant at Kyiv, known as the State Specialized Enterprise Kyiv State Inter-regional Specialized Combine.



### WP 3 – Site Restoration

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

### For further information

NATO Support and Procurement Agency  
Partnership for Peace Section  
Mr Tom Van Beneden  
tom.vanbeneden@nspa.nato.int