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**THIS ACTION IS FUNDED BY THE EUROPEAN UNION**

**ANNEX**

to the Commission Implementing Decision amending Implementing Decision C(2020) 5652 on the Annual Action Programme for Nuclear Safety Cooperation for 2020 to be financed from the general budget of the Union 2020

**Action Document for Safe management of spent fuel and radioactive wastes**

**ANNUAL PROGRAMME 2020**

This document constitutes the annual work programme in the sense of Article 110(2) of Regulation (EU, Euratom) 2018/1046 and action programme/measure in the sense of Articles 2 and 3 of Regulation (EU) No 236/2014.

<b>1. Title/basic act/ CRIS number</b>	Action document for nuclear waste management CRIS number: INSC/2020/042508 & 042509 financed under the Instrument for Nuclear Safety Cooperation	
<b>2. Zone benefiting from the action/location</b>	Neighbourhood East (Moldova and Ukraine) The action shall be carried out at the following location: Chişinău, Kamyanske and Chornobyl	
<b>3. Programming document</b>	Commission implementing decision of 6.11.2017 on the Instrument for Nuclear Safety Cooperation Multiannual Indicative Programme (2018-2020) – C(2017) 7254	
<b>4. Sustainable Development Goals (SDGs)</b>	Main SDG(s): 16 (strong institutions) Other significant SDG(s): 3 (good health and well-being), SDG 15 (Life and Land)	
<b>5. Sector of intervention/ thematic area</b>	Nuclear Safety	DEV. Assistance: YES
<b>6. Amounts</b>	Total estimated cost: EUR 25 110 000	

<b>concerned</b>	Total amount of EU budget contribution EUR 13 500 000 This action is co-financed in co-financing by: - Sweden for an amount of EUR 680 000 - Ukraine for an amount of EUR 10 930 000			
<b>7. Aid modality(ies) and implementation modality(ies)</b>	Project Modality <b>Indirect management</b> with the Swedish International Development Cooperation Agency (Sida), Science and Technology Center in Ukraine (STCU), International Science and Technology Center (ISTC)			
<b>8 a) DAC code(s)</b>	23510			
<b>b) Main Delivery Channel</b>	1000 - Public Sector Institutions			
<b>9. Markers (from CRIS DAC form)</b>	<b>General policy objective</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Participation development/good governance	<input type="checkbox"/>	X	<input type="checkbox"/>
	Aid to environment	<input type="checkbox"/>	X	<input type="checkbox"/>
	Gender equality and Women's and Girl's Empowerment	X	<input type="checkbox"/>	<input type="checkbox"/>
	Trade Development	X	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, Maternal, Newborn and child health	X	<input type="checkbox"/>	<input type="checkbox"/>
	Disaster Risk Reduction	<input type="checkbox"/>	X	<input type="checkbox"/>
	Inclusion of persons with disabilities	X	<input type="checkbox"/>	<input type="checkbox"/>
	Nutrition	X	<input type="checkbox"/>	<input type="checkbox"/>
	<b>RIO Convention markers</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Biological diversity	X	<input type="checkbox"/>	<input type="checkbox"/>
	Combat desertification	X	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation	X	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change adaptation	X	<input type="checkbox"/>	<input type="checkbox"/>
<b>10. Global Public Goods and Challenges (GPGC) thematic flagships</b>	N/A			

## **SUMMARY**

In accordance with the Multi Annual Indicative Programme 2018-20<sup>1</sup>, the overall objective of the action is to provide support in the safe management of radioactive wastes and spent nuclear fuel as well as in environmental remediation of former nuclear sites, which contributes to climate change adaptation.

This action will be implemented in a COVID-19 context and adapted as necessary for a successful completion.

## **1 CONTEXT ANALYSIS**

### **1.1 Context Description**

The safe management and storage of radioactive wastes in Moldova and Ukraine are both nuclear safety issues with high priority to prevent and remediate situations that affect the health of local population and their environment.

### **1.2 Policy Framework (Global, EU)**

Cooperation on the safe management of radioactive wastes in Moldova aims at supporting the implementation of the National Strategy for Radioactive Waste Management (hereinafter referred as National Strategy) adopted by the Parliament of Moldova in 2017 in a joint effort with Sweden.

Support to Ukraine is embedded in the Association Agreement signed in 2014 and fully in force since September 2017 that includes a dedicated chapter related to nuclear safety cooperation.

All three actions promote the transparency and public information based on the *EU acquis* (in particular Directive 2011/70/Euratom and Directive 2013/59) which is transferred to the beneficiary countries.

### **1.3 Public Policy Analysis of the partner country/region**

#### **Component A: Moldova**

The Republic of Moldova is a non-nuclear country; however, radioactive material/sources in research, medical, industrial, and agricultural fields has been widely used since late 1950's. Due to this, a significant amount of institutional radioactive waste have been created, including a large number of disused sealed radioactive sources. To address the issue, a National Radioactive Waste Mg Co (Special Facilities 5101, 5102) was established by a special decree, issued by the Government of the USSR on 15 October 1960 and was operational until 1995 as a national disposal site for institutional radioactive waste. In 1995 Republic of Moldova became a member of the International Atomic Energy Agency (IAEA) and one of the first recommendations made by IAEA experts was to stop using this site as a disposal site, due to safety concerns of the Near Surface Disposal Facility of the "RADON" type. Radioactive waste disposal was done without conditioning according to type of waste and the half-life of predominant radionuclides.

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<sup>1</sup> C(2017) 7254 of 06.11.2017

According to the operator, an elevated groundwater table was observed inside the vault during late 1990s. This has contributed to a degradation of the containers and to the migration of radionuclides from the repository to the environment (soil and ground water). The National Centre of Preventive Medicine performed two measurement/sampling campaigns, on the site, in 1996 and 1997. Critical contamination with radionuclides Sr-90 and Ra-226 of soil and groundwater was detected. The contamination is spread about 2.3 m far from the wall of the vault. Given the fact that the site is near Bubuieci village and is in the area of Chişinău it is necessary to undertake urgent measures to halt the migration of radionuclides from the underground storage and to decommission, decontaminate, and remedy the affected/contaminated area.

From 2017 until 2019 a project for scientifically confirming the need for retrieval of legacy waste from the Near Surface Disposal Facility was supported by SSM Sweden. As a result of the implementation of this project a Safety Assessment of Zero Alternative Scenario for Near Surface Disposal Facility have been conducted, concluding that there is an urgent need for the retrieval of legacy waste to ensure safety of population and environment.

2003-2005 two new storage facilities were constructed one for conditioned low-level radioactive waste (supported by IAEA) and one for disused sealed sources (supported by US-DOE).

In 2017 the Parliament of Moldova approved a National Strategy for Radioactive Waste Management (hereinafter referred as National Strategy) with an Action Plan for its implementation for the period 2017-2026. The National Strategy describes the current situation and pays major attention to RADON-type disposal facility. The National Strategy is accompanied by an Action Plan that includes measures for decommissioning of the underground storages; repackaging of the waste; decontamination; remediation; and management of the generated radioactive waste. It is planned to complete these actions by 2026. The National Strategy defines disposal as the end point for radioactive waste management and identifies a borehole facility as a disposal option. Key elements of the action plan include:

- Decommissioning of a legacy RADON-type disposal facility
- Management of orphan radioactive sources
- Need for development of disposal options for all radioactive waste
- Public awareness programme
- Development of radiological monitoring programme
- Impact assessment for radioactive waste management
- Further development of legal framework, including new legislation for disposal
- Training of human resources (e.g. training centres in the field of RWM)
- Creation of sustainable mechanism for funding of radioactive waste management

### **Component B: Prydniprovskiy Chemical Plant in Ukraine**

The Prydniprovskiy Chemical Plant (PCP), during its operation from 1947 to 1992, was one of the largest enterprises of uranium production in former Soviet Union. This enterprise processed uranium ores of different geochemical composition that had been mined in Ukraine, Central Asia and former Eastern Bloc countries. As a result of the uranium production at the PCP site, there are five tailings storage facilities and two industrial waste disposal facilities (including radioactive waste) as well as other facilities that are now considered as uranium

production legacy sites.

Following the end of uranium production at the PCP during the period from 1992 to 2000, no planned or regulatory controlled decommissioning measures or clean-up of radioactive and contaminated areas have been performed. However, it is apparent that considerable amounts of highly radioactive and contaminated pipework as well as equipment have been dismantled and illicitly removed from the site. Some buildings and industrial facilities have been repurposed for other industrial production as state property, whilst others have passed to the private sector via long-term leasing or direct purchasing. It is evident that in a number of cases, the new owners have undertaken some clean-up activities of their facilities, but without regulatory control, by non-radiological workers and in a non-systematic way. Because of these activities, around 190 ha of the Southern sector of the industrial site has significant amounts of high radioactive contamination and poses a serious threat to the personnel of the enterprises, which have premises in that area of the PChP site, as well as to the people of the nearby city of Kamyanske.

### **Component C: Chornobyl**

The EU has a long-standing engagement with the Chornobyl Exclusion Zone dealing with the legacy of the 1986 accident. Under EU cooperation, Ukraine has produced a road map for a sustainable management of the radioactive waste and associated facilities that will allow the phasing out of the international support. Moreover, still with the EU strong involvement, until the invasion of Ukraine by the Russian Federation armed force on 24-02-2022, the State Agency of Ukraine on the Exclusion Zone Management (SAUEZM) had recovered full access to the country's radioactive waste fund collecting the contribution of the producers. The restored situation was facilitating a co-financing of projects close to 50%, which demonstrates the solid involvement of the organisation responsible for the management of the exclusion zone and the national programme for radioactive waste management.

#### **1.4 Stakeholder analysis**

The government of Moldova will receive support from the Swedish Radiation Safety Authority (SSM) for the implementation of the National Strategy for Radioactive Waste Management (hereinafter referred as National Strategy) adopted by the Parliament of Moldova in 2017. The main entities in charge are: NARNRA, the National Agency for Regulation of Nuclear and Radiological Activities, as the regulatory body for facilities and activities posing radiation risk; RWMCo, the National Radioactive Waste Management Company in charge of Safe Management of Radioactive waste (collection, pre-treatment, treatment, conditioning, storage and disposal) and unique national operator in this field; INOTEH, a technical Support Organization for NARNRA and RWMCo.

In Ukraine, for the Pridniproviskiy Chemical Plant the main stakeholder is the Ministry of Energy and Environmental Protection of Ukraine being the government institution responsible for the safety of several contaminated uranium legacy site buildings, as well as being responsible for the overall site security. Of other key stakeholders will be the local authorities and Science and Technology Centre of Ukraine (STCU), which has the necessary competences and privileges (as e.g. tax exemptions) for the project implementation.

For Chornobyl, the principal beneficiary organization is the Agency in charge of the Exclusion Zone SAUEZM. Wider benefits will be delivered to the population of Ukraine and neighbouring states, through improved safety of radioactive waste. The implementation of component C could be delegated to the Science and Technology Centre of Ukraine (STCU), which has the necessary competences and privileges (as e.g. tax exemptions).

## **1.5 Problem analysis/priority areas for support**

### **Component A – Moldova**

With the support of Sweden, the Parliament of Moldova has adopted a National Strategy for Radioactive Waste Management with an Action Plan for its implementation for the period 2017-2026. The Action Plan includes measures for decommissioning of the underground storages; repackaging of the waste; decontamination; remediation; and management of the generated radioactive waste. It is planned to complete these actions by 2026. The National Strategy defines disposal as the end point for radioactive waste management and identifies a borehole facility as a disposal option. The project will support on-going Swedish activities for the implementation of the Strategy and Action Plan.

### **Component B - Remediation of the Prydniprovskiy Chemical Plant in Ukraine**

The overall remediation programme for the complex radioactively contaminated uranium legacy site of Pridniprovskiy Chemical Plant, has been supported by the EU in consecutive phases. EU support was first provided in 2010 that developed a comprehensive study and design of remediation strategy for the site. This Phase I delivered the detailed planning documents required for prioritized remediation activities, which foresees the utilisation of effective methodologies, tools and strategies for the overall decommissioning and remediation of the Pridniprovskiy site, in line with international best practice. Phase I was the basis for Phase II that are implementing urgent safety measures, and which is financed under the annual action programme 2016.

The objective of the present Phase III project is to finalise outstanding Phase II activities and to start longer-term safe clean-up of radiological hazards, set-up and improve infrastructure for waste storage and disposal, decommissioning of those contaminated buildings and site areas both utilised in, and affected by uranium processing.

### **Component C: Chornobyl**

In the aftermath of the 1986 Chornobyl disaster radioactive debris from around the site were removed to various nearby localities. Attempts were made to sort the material according to its activity with much of the most active material (including some nuclear fuel) going to the Pidlisnyi facility. The Pidlisnyi Facility, which is a specially constructed above-ground structure for the storage of Long-Lived High Level Waste materials consists of eight concrete modules, two of which have been filled. The facility was commissioned in December 1986 with a design life of 20 years. Possible options, recommend technological solutions and timescales to remediate the Pidlisnyi facility should be produced by transferring of capabilities to Ukrainian staff. The corresponding techniques will apply to the analysis of similar waste burials in the Chornobyl Exclusion Zone. It is necessary to establish a remediation strategy for the Pidlisnyi Facility, based on the characterisation of samples taken from the facility, for which a Sampling Methodology is required. The remediation strategy which is to be based on the results of technical investigations, materials characterisation and sound safety analysis related to the taking of samples, their transportation to a laboratory and the characterisation itself, can only be achieved following sufficient sample analysis. Following regulatory approval of the sampling methodology, and specification of required sampling equipment, the sampling and characterisation, is to be implemented jointly by the appropriate Ukrainian operating organisations. However, due to the ongoing war in Ukraine, and the infrastructure damage caused during the Chornobyl Exclusion Zone occupation by the RF forces in 2022, the sampling and characterization of the High-Level Radioactive Waste materials at the Pidlisnyi HLW Storage Facility, will not be achievable within the time frame

of this project. Thus, this component foresees the implementation of all required activities to the point of sampling and materials characterisation.

Second, water resources (surface and ground water) of the Exclusion Zone are subject to contamination from radioactive sources that were created during and following the 1986 accident at Chornobyl NPP Unit 4. Contamination enters the Pripjat River and, from there, the Dnieper River which is the main source of drinking water for Kyiv. Moreover on 24.02.2022, the Russian Federation started an invasion war in Ukraine. The Chornobyl Exclusion Zone, which lies at the border with Belarus, was one of the points of entry of the Russian forces and was occupied until 31.03.2022. Massive movements of military vehicles through the contaminated territories, and infrastructure damage, have changed the characteristics of the nuclear waste storage and increase the risk of underground water contamination.

A water monitoring network exists but it is obsolete and, in some cases, not operational. Its coverage does not provide sufficient data to allow the main sources of contamination to be identified or radionuclide migration to be adequately modelled. This makes it hard to forecast either short- or long-term trends and impedes the determination of strategy for water-protection activities in the Exclusion zone. Such forecast is highly important for the estimation of safety and environmental impact of contaminated water.”

## 2 RISKS AND ASSUMPTIONS

Risks	Risk level (H/M/L)	Mitigating measures
Component A: Public opposition to plans for final disposal	L	Public awareness programme and public consultation in connection with development of a Strategic Environmental Assessment and an Environmental Impact Assessment for final disposal
Insufficient human resources	M	Development of human resource plan within the Action. Procure external expertise to compensate for lack of human capacity within the Action.
Component B: Lack of ownership by the Ukrainian Authorities	M to H	Urgent discussions/communications with the relevant authorities, at the highest level, being established.
The site operator "SE Barrier" Operators License is not extended to include all required activities related to day to day operational and site remedial tasks	M	It is anticipated that the Urgent Measures under implementation in the Frame of INSC U4.02/16 have strengthened SE Barriers capability such that their application meets with legislative and regulatory requirements
Potential overlap with or negative impact from the implementation of the Ukraine funded programme for PCP remediation works, and or other international donor funded projects for PCP	L	All activities are coordinated locally and oversight is managed by a high-level joint working group of representatives from each of the principal stakeholders
Component C: Continuity of SAUEZM ownership due to the current changes in the Ukraine administration.	M	Discussions/communications with the Ministry of Energy and Environmental Protection and SAUEZM being established at the highest level.  Flexibility in the budget of the action and indirect

the state of war prevents or delays the implementation of the action.	H	management by a Ukraine-based organisation will allow better adaptation to the changing context.
<b>Assumptions</b>		
<ul style="list-style-type: none"> <li>- The involvement of local and international experts will allow a satisfactory result to be reached</li> <li>- Strong communication and support from all stakeholders, authorities, beneficiary and end-users.</li> </ul>		

### 3 LESSONS LEARNT AND COMPLEMENTARITY

#### 3.1 Lessons learnt

The project will benefit from experience gained from the implementation of past projects in Moldova with inter alia EU and Sweden as well as in the implementation of previous project Ukraine in the frame of the TACIS, IPA and INSC nuclear safety programmes.

#### 3.2 Complementarity, synergy and donor coordination

**Component A:** Planned Sida project – that will be part of this Action.

The Swedish International Development Cooperation Agency (Sida) finances a project with SSM as implementing organisation, on development and implementation of a radiological monitoring programme at the national waste management site and the construction of storage facility for radioactive waste from decommissioning of the Radon-type disposal facility. This activity will be part of the above-mentioned project through a joint action, allowing a bigger engagement with Moldova.

**Component B & C:** With regards to the Pridniproviskiy Chemical Plant (PCP) some longer-term support in the definition of an appropriate remediation strategy is supported under IAEA financing. Close coordination between EC and IAEA activities is currently in place and will be maintained to ensure no replication of activities.

Additionally, with support from the Norwegian Government, Ukraine is implementing work related to:

- the improvement of ground water monitoring systems in and around the PCP site;
- preparatory activities related to the release of the uncontaminated northern sector of the PCP site from regulatory control.

Activities related to these international donor programmes, as well as the EU funded programme for PCP, are complimentary to and fully coordinated with Ukraine's national programme for the remediation of the former Pridniproviskiy Chemical Plant.

Chornobyl related activities are strongly coordinated with the IAEA, the EBRD and the G7 through the Chornobyl Contact Group chaired by the European Commission.

### 4 DESCRIPTION OF THE ACTION

#### 4.1 Overall objective, specific objective(s), expected outputs and indicative activities

##### **Component A: Moldova**

Moldova is prepared for retrieval activities of legacy radioactive waste and has identified final disposal solutions, in accordance with the National Action plan for 2017-2026 (under the National Strategy for radioactive waste management).



The following **specific objectives** are to be realised:

- Updated legal and regulatory framework in line with EU and international standards;
- Feasibility study on final disposal solutions performed;
- Interim storage facility constructed;
- Radiological and environmental monitoring programme installed;
- Equipment for retrieval, treatment and storage of radioactive waste provided and installed;
- Human resource plan for operator and regulator in place.

This to be achieved by providing regulatory support, equipment and human capacity building as follows:

- Providing equipment for interim storage facility (the facility constructed by Sida), i.e., crane for the long-term storage building, forklift, radiation monitoring inside the storage facility, etc.;
- Providing technological and radiological equipment for retrieval activities (i.e. crane/bridge cranes at the containment, buffer storage and storage facility, fire alarm systems, lighting, dismantling and decontaminating tools (backhoes with pneumatic jackhammer and other auxiliary tools, loader, hand held pneumatic jackhammer, dump truck, small mobile crane/manipulator to assist the operation in the containment), radiation monitoring systems, discharge monitoring systems, ventilation system, radiation monitoring systems, a dose-rate measurement system and associated computing/software, gamma scanner, portable LSC meter (for  $^3\text{H}$ ,  $^{14}\text{C}$ ,  $^{90}\text{Sr}$ ), automated air quality measurement system, individual radiation protection equipment;
- Human capacity building;
- Strengthening of the regulatory framework in radioactive waste management field;
- Reviewing and update the regulatory framework in the decommissioning and disposal fields in relations to EU directives and international standards;
- Enhancing regulatory authority's capacity for reviewing and supervising the development and implementation of the disposal program as well as decommissioning activities;
- Starting the implementation long-term disposal programme of radioactive waste in Republic of Moldova (identified in the IAEA prefeasibility study);
- Further development of disposal concepts/system identified in the prefeasibility study (IAEA project);
- Sida, in parallel, within the framework of this Action will construct the interim storage facility and develop an environmental and radiological monitoring programme.

### **Component B: Remediation of the Prydniprovskiy Chemical Plant in Ukraine**

The overall objective is to complete the Emergency Measures that are implemented to support improved radiological safety and the security of radiologically contaminated materials located at the PChP Site, and to commence essential start-up activities associated with the longer-term site remediation.

The specific objectives are:

- Completion of the most urgent measures to achieve radiological safety at the site and to secure the radiologically contaminated materials within regulatory control;
- Establish a RAW management Infrastructure in preparation for site remediation activities;
- Detail design and implementation of high priority remediation works as identified under Phase I and II;
- Ensure Radiological safety on the site during work implementation.

This will be achieved by providing support in the following aspects among others:

- Completion and finalisation of remaining urgent measure activities under the Phase II work program, as for example; further strengthening of the legal and regulatory framework for Uranium Legacy Sites in Ukraine, as well as the enclosure of contaminated buildings and/or relocation and safe storage of ‘free standing and easy to move’ radiological hotspots, to restricted areas under regulatory control;
- Development of RAW management plan and temporary storage facility for highly contaminated equipment and material;
- Implement high priority actions that have been identified under Phase I and II as for example, the characterisation and removal of highly contaminated objects from contaminated buildings to a safe storage facility and/or initial remediation works on contaminated buildings and structures;
- Capacity building of key stakeholder at the PChP site and ensure appropriate radiological safety structures as for example a change facility.

### **Component C: Chornobyl**

The action is twofold:

#### ***1. Options for the long-term management of high-level long-lived radioactive waste currently located at the Pidlisnyi facility***

The overall objective is to develop recommendations related to the possible options and technological solutions for the future management of the Pidlisnyi facility and the waste it contains.

The specific objectives are:

- Support the establishment of methodologies, procedures and technical specifications for procurement, based on supporting safety analysis, to support the eventual development of a remediation strategy related to the longer-term management of the Pidlisnyi facility;
- Supply of specialist equipment necessary to support the extraction of samples of RAW materials from the Pidlisnyi facility;
- Sustainable transfer of knowledge and capability relative to the long-term management of existing radioactive waste storages resulting from the Chornobyl Accident;
- Develop the skills of Ukrainian staff to allow them to perform similar analyses at other storages, independently.

#### ***2. Design of comprehensive water monitoring system for the ChEZ***

The overall objective is the design of improved radiation monitoring of water resources in the Exclusion zone.

The specific objectives are:

- Investigation of existing water monitoring system of different objects inside the ChEZ. Identification of problems and tasks which need solution;
- Creation of, or update existing, model of ground and surface water behaviour;
- Development of a design ToR of the water resource monitoring system in the Exclusion zone;
- Development of design documentation, technological processes for sampling and measurements selected based on the technical and economic analysis;
- Development of technical specifications for equipment supply;
- Reestablishment of existing most urgently needed elements of water monitoring infrastructure.

The work implemented by the mean of a service contract will involve the Ukrainian scientific and supporting organisations to achieve a broader share of experience and knowledge in this field.

## **4.2 Intervention Logic**

The action contributes to the improvement of the radioactive waste management in Moldova and Ukraine by enhancing the capacity of the waste management operator and support the implementation of the respective national waste management strategies. Considering the action at the Pridniproviskiy chemical plant, which is still heavily contaminated and poorly secured, it will further improve the radiological situation at Kamyanske by the remediation activities that will directly impact on the health of the population and the protection of the environment.

## **4.3 Mainstreaming**

Safe management of radioactive wastes as well as environmental remediation in partner countries includes capacity building that is achieved in particular by means of specific training. In all these activities, the European Commission promotes the participation of women as part of the gender equality.

## **4.4 Contribution to Sustainable Development Goals (SDGs)**

This intervention is relevant for the United Nations 2030 Agenda for Sustainable Development it contributes primarily to the progressive achievements of SDG 3 *Good Health and Wellbeing*, SDG 15 *Life and Land* and SDG 16 *Peace, Justice, and Strong Institutions*.

# **5 IMPLEMENTATION**

## **5.1 Financing agreement**

In order to implement this action, it is not foreseen to conclude a financing agreement with the partner country for component A & B. It is foreseen to conclude a financing agreement with the partner country (Ukraine) for component C.

## **5.2 Indicative implementation period**

The indicative operational implementation period of this action, during which the activities described in section 4 will be carried out and the corresponding contracts and agreements implemented, is 96 months from the date of entry into force of the financing agreement for

component C, 84 months from the date of adoption by the Commission of this Financing Decision for component A & B.

Extensions of the implementation period may be agreed by the Commission's responsible authorising officer by amending this Decision and the relevant contracts and agreements.

### **5.3 Implementation modalities for an action under project modality.**

The Commission will ensure that the EU appropriate rules and procedures for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the action with EU restrictive measures<sup>2</sup>.

#### **5.3.1 Procurement (direct management)**

N.A.

#### **5.3.2 Indirect management with a Member State Organisation and an International Organisation.**

##### **Component A: Moldova**

This action may be implemented in indirect management with the Swedish International Development Cooperation Agency (Sida). This implementation entails possible calls for tender. The implementation mode is justified because the Swedish Radiation Safety Authority (SSM) – that will work with Sida — has the necessary competences and privileges (as e.g. tax exemptions) for the project implementation.

If negotiations with the above-mentioned entity fail, (part of) this action may be implemented in indirect management with Science and Technology Center in Ukraine (STCU). The implementation by this alternative entity would be justified because STCU has the necessary competences and privileges (as e.g., tax exemptions) for the project implementation.

The entrusted entity would carry out the following budget-implementation tasks: acting as contracting authority concluding, monitoring, and managing contracts, carrying out payments, and recovering moneys due; management of procurement procedures for hiring staff, purchasing goods and equipment, hiring consulting services, and any other relevant transactions.

Subject to the following, the geographical eligibility in terms of place of establishment for participating in procurement procedures and in terms of origin of supplies and materials purchased as established in the basic act and relevant contractual documents shall apply.

The responsible authorising officer may extend the geographical eligibility in accordance with Article 14(7) of the basic act, based on the unavailability of products and services in the markets of the countries concerned, for reasons of extreme urgency, or if the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

##### **Component B: Prydniprovskiy Chemical Plant in Ukraine**

This action may be implemented in indirect management with the Science and Technology Center in Ukraine (STCU) and/or International Science and Technology Center (ISTC). The implementation mode is justified because both the STCU and/or ISTC have the necessary competences and privileges (as e.g., tax exemptions) for the project implementation. Both

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<sup>2</sup> [www.sanctionsmap.eu](http://www.sanctionsmap.eu) Please note that the sanctions map is an IT tool for identifying the sanctions regimes. The source of the sanctions stems from legal acts published in the Official Journal (OJ). In case of discrepancy between the published legal acts and the updates on the website it is the OJ version that prevails.

organisations have also demonstrated in past projects financed by the Instrument for Nuclear Safety Cooperation their technical and organizational capabilities for the implementation of waste management and environmental remediation activities.

The entrusted entity would carry out the following budget-implementation tasks: acting as contracting authority concluding, monitoring, and managing contracts, carrying out payments, and recovering moneys due; management of procurement procedures for hiring staff, purchasing goods and equipment, hiring consulting services, and any other relevant transactions.

Subject to the following, the geographical eligibility in terms of place of establishment for participating in procurement procedures and in terms of origin of supplies and materials purchased as established in the basic act and relevant contractual documents shall apply.

The responsible authorising officer may extend the geographical eligibility in accordance with Article 14(7) of the basic act, based on the unavailability of products and services in the markets of the countries concerned, for reasons of extreme urgency, or if the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

### **Component C: Chornobyl**

Component C may be implemented in indirect management with the Science and Technology Center in Ukraine (STCU). The implementation mode is justified because the STCU has the necessary competences and privileges (as e.g., tax exemptions) for the project implementation. In past projects financed by the Instrument for Nuclear Safety Cooperation, this organisation has also demonstrated its technical and organizational capabilities for the provision of specific equipment for waste management and monitoring and is particularly active in Ukraine where it is established.”

The entrusted entity would carry out the following budget-implementation tasks: acting as contracting authority concluding, monitoring, and managing contracts, carrying out payments, and recovering moneys due; management of procurement procedures for hiring staff, purchasing goods and equipment, hiring consulting services, and any other relevant transactions.

Subject to the following, the geographical eligibility in terms of place of establishment for participating in procurement procedures and in terms of origin of supplies and materials purchased as established in the basic act and relevant contractual documents shall apply.

The responsible authorising officer may extend the geographical eligibility in accordance with Article 14(7) of the basic act, based on the unavailability of products and services in the markets of the countries concerned, for reasons of extreme urgency, or if the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

### **5.4 Scope of geographical eligibility for procurement and grants**

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply.

a) The Commission’s authorising officer responsible may extend the geographical eligibility, based on urgency or of unavailability of products and services in the markets of the countries concerned, or in other duly substantiated cases where the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

## 5.5 Indicative budget

	<b>EU contribution (amount in EUR)</b>	<b>Indicative third party contribution, in currency identified</b>
Component A	2 800 000	680 000
Component B	5 700 000	9 430 000
Component C	5 000 000	1 500 000*
<b>Totals</b>	<b>13 500 000</b>	<b>11 610 000</b>

\*) Contribution in 'kind' by beneficiary /end-users by providing staff resources (man-days).

## 5.6 Organisational set-up and responsibilities

The implementation of the component A will be done by indirect management through the Swedish International Development cooperation Agency (Sida).

The implementation of the component B will be done by indirect management through the Science and Technology Centre in Ukraine (STCU).

The implementation of the component C will be done by indirect management through the Science and Technology Centre in Ukraine (STCU).

As part of its prerogative of budget implementation and to safeguard the financial interests of the Union, the Commission may participate in the above governance structures set up for governing the implementation of the action.

## 5.7 Performance and Results monitoring and reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process, and part of the implementing partner's responsibilities. To this aim, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators, using as reference the log frame matrix.

Reports shall be laid out in such a way as to allow monitoring of the means envisaged and employed and of the budget details for the action. The final report, narrative and financial, will cover the entire period of the action implementation.

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

## **5.8 Evaluation**

Having regard to the nature of the action, a final evaluation will not be carried out for this action or its components.

In case an evaluation is not foreseen, the Commission may, during implementation, decide to undertake such an evaluation for duly justified reasons, either on its own decision or on the initiative of the partner.

The evaluation reports shall be shared with the partner country and other key stakeholders. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

The financing of the evaluation shall be covered by another measure constituting a financing decision.

## **5.9 Audit**

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, based on a risk assessment, contract independent audits or expenditure verification assignments for one or several contracts or agreements.

The financing of the audit shall be covered by another measure constituting a financing decision.

## **5.10 Communication and visibility**

Communication and visibility of the EU is a legal obligation for all external actions funded by the EU.

This action shall contain communication and visibility measures which shall be based on a specific Communication and Visibility Plan of the Action, to be elaborated at the start of implementation.

For the purpose of enhancing the visibility of the EU and its contribution to this action, the Commission may sign or enter into joint declarations or statements, as part of its prerogative of budget implementation and to safeguard the financial interests of the Union.

In terms of legal obligations on communication and visibility, the measures shall be implemented by the Commission, the partner country, contractors, grant beneficiaries and/or entrusted entities. Appropriate contractual obligations shall be included in, respectively, the financing agreement, procurement and grant contracts, and delegation agreements.

The Communication and Visibility Requirements for European Union External Action (or any succeeding document) shall be used to establish the Communication and Visibility Plan of the Action and the appropriate contractual obligations.

**APPENDIX - INDICATIVE LOGFRAME MATRIX (FOR PROJECT MODALITY)**

Results chain		Indicator	Baseline (value & ref year)	Target (value & ref year)	Data source	Assumpti ons
	2 Responsible and safe management of spent fuel and radioactive waste (transport, pre-treatment, treatment, processing, storage, disposal), including decommissioning and remediation of former nuclear sites and installations.	Number of pieces of regulatory legislation aligned to the EU Directives that are passed at the Parliament			Government Reports	
Outcome to Impact 2	2.1 Long-term national strategies for spent fuel and radioactive waste management and/or regulatory frameworks related to the management of spent fuel and radioactive waste, nuclear material and disused sealed radioactive sources implemented successfully	2.1.1 Status of approval by the Regulatory Authority of the design, safety assessment and waste acceptance criteria for the licensing of the radioactive storage facilities in the country	Not approved	Approved and in force	Decision document of the Regulatory Authority Intervention's final report	
		2.1.2 Status of establishment of a uniform integrated Radwaste management organisation in the country	Not developed	Established	Decision document of the Regulatory Authority Intervention's final report	
		2.1.3 Status of establishment of an updated regulatory framework for the licensing of radioactive storage facilities in accordance with the international standards	Not developed	Established	Decision document of the Regulatory Authority Intervention's final report	



Results chain	Indicator	Baseline (value & ref year)	Target (value & ref year)	Data source	Assumptions
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	2.1.1 A roadmap for the establishment of a uniform integrated Radwaste management organisation is developed in the country	2.1.2.1 Status of radwaste management programming	No strategy / plan exists	A strategy and a roadmap are adopted	Decision document of the Regulatory Authority Intervention's progress reporting	
	2.1.2 An updated regulatory framework for the licensing of radioactive storage facilities is developed in accordance with the international standards	2.1.2.1 Advanced regulatory safety evaluation of improvements in the radwaste storage facility is established	Inexistent	The regulatory requirements for a conditioned radwaste storage established	Decision document of the Regulatory Authority Intervention's progress reporting Training assessment results	
	2.1.3 The safe processing and storing of radioactive waste and disused sources (of a nuclear installation) is supported.	2.1.3.1 Status of regulation of radwaste treatment onsite	Not complete licensing regulation	Complete licensing regulation	Decision document of the Regulatory Authority Intervention's progress reporting Training assessment results	

Results chain		Indicator	Baseline (value & ref year)	Target (value & ref year)	Data source	Assumpti ons
	2.1.10 The regulatory framework related to the management of spent fuel and radioactive waste / nuclear material / disused sealed radioactive sources is developed (or completed, or updated)	2.1.10.1 Number of revised/ new regulations/ pieces of legislation adopted by the regulatory authority for regulating the management on site, safe transport, and storage of spent fuel/ nuclear material/ disused sources	Not complete	Complete regulation	Decision document of the Regulatory Authority  Intervention's progress reporting	

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