

Project Fiche – IPA centralised programmes
Part II of the Horizontal Programme on Nuclear Safety and Radiation Protection

1. Basic information

- 1.1 CRIS Number:** 2007/019-301
- 1.2 Title:** Assessment of needs and proposed actions to strengthen the safety and security of sealed radioactive sources in Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo (as defined by UNSCR 1244)¹
- 1.3 Sector:** 06.64 - Nuclear Safety
- 1.4 Location:** Tirana (Albania), Sarajevo (Bosnia and Herzegovina), Zagreb (Croatia), Skopje (the former Yugoslav Republic of Macedonia), Podgorica (Montenegro), Belgrade (Serbia) and Prishtina (Kosovo)

Implementing arrangements:**1.5 Contracting Authority:**

The European Community represented by the Commission of the European Communities for and on behalf of Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo in joint management with the IAEA.

1.6 Implementing Agency:

The International Atomic Energy Agency (IAEA), Office of Nuclear Security.

1.7 Beneficiaries:

Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo.

Financing

- | | |
|--|------------|
| 1.8 Overall cost: | €260,000 |
| 1.9 EU contribution: | €260,000 |
| 1.10 Final date for contracting: | 30/11/2008 |
| 1.11 Final date for execution of contracts: | 30/11/2010 |
| 1.12 Final date for disbursements: | 30/11/2011 |

¹ Hereafter referred to as Kosovo

2. Overall Objective and Project Purpose

2.1 Overall Objective:

To improve the safety and security of sealed radioactive sources in the beneficiary countries in line with the Euratom Directive 2003/122, international instruments, standards and recommendations.

2.2 Project purpose:

To analyse safety and security aspects of the current management practices and regulatory control of sealed radioactive sources in Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo in order to identify possible areas for which improvement and/or optimisation in line with the Euratom Directive 2003/122 and international instruments, standards and recommendations would be desirable.

2.3 Link with AP/NPAA/EP/SAA

The sectoral policies of the European/Accession Partnerships with Albania (2006/54/EC), Bosnia and Herzegovina (2006/55/EC), Croatia (2006/145/EC), the former Yugoslav Republic of Macedonia (2006/57/EC), Montenegro (2007/29/EC), and Serbia (2006/56/EC) in the field of environment mention the strengthening of the administrative capacity, and alignment of the legislation to the acquis. In addition the AP with Croatia and the former Yugoslav Republic of Macedonia, and the EP with Montenegro specifically refer to nuclear safety and radiation protection issues. Finally article 103 of the Stabilisation and Association Agreement with the former Yugoslav Republic of Macedonia mentions nuclear safety and radiation protection as one of the issues for cooperation.

2.4 Link with MIPD

The MIPD action entitled "Nuclear Safety and Radiation Protection" mentions that "the Western Balkan countries are confronted with a number of radiological issues that are connected with the use of radionuclides for a number of industrial and medical applications and thereby generate so-called institutional radioactive waste". In this context, the MIPD intends to:

- facilitate networking, the sharing of best practices and lessons learned across the beneficiary authorities;
- provide technical assistance to facilitate the preparation and implementation of national legislation and regulations in line with the relevant EU acquis, and best EU practices.

This regional exploratory study will aim at disseminating the information on current regulatory and management practices of sealed radioactive sources in each of the six beneficiary countries abovementioned, and on this basis to identify those areas that might be recommended for possible IPA future technical assistance in order to enable these countries to be in line with the relevant EU acquis and best EU practices.

3. Description of project

3.1 Background and justification:

Sealed radioactive sources are widely used in industry, medicine and research. Mismanagement of these sources may lead to acute exposure of workers and members of the public and in some cases to significant contamination of the environment. In addition, possible malicious use of sealed radioactive sources is currently raising a lot of concern amongst regulatory bodies, police and law enforcement services in EU Member States and Candidate countries as well. The risks that a sealed radioactive source becomes orphan i.e. is no more under regulatory control is equally an important source of concern. In this context, since the turn of the century the European Commission launched a number of projects in Central Europe and Eastern Countries aiming at

improving the safety of the management of sealed radioactive sources and by this enhancing nuclear security in line with the provisions of the Euratom Directive 2003/122 (see section 3.6).

In the Western Balkan countries, a large variety of situations exists regarding management of sealed radioactive sources. One of the main features of the Western Balkans countries is that thousands of significantly radioactive lightning rods have been produced and installed everywhere and notably around public buildings (Ministries, schools, museums, etc) and military stores. These lightning rods need to be removed, dismantled and stored in safe conditions. This would require the availability of appropriate and modern central storage facilities for radioactive waste in each Western Balkan country which is not yet the case.

The current regulations in force as well as management practices in the Western Balkan countries are not yet fully reflecting the provisions of the Euratom Directive 2003/122. This situation was highlighted during the technical seminar organised by the Commission services in March 2005 on the updating of the report devoted to the "management of sealed radioactive sources in Central Europe and Eastern Countries".

In addition, security aspects of the management of high-activity sealed radioactive sources (category 1 of the IAEA Code of Conduct) in the Western Balkan countries were pointed out by the International Atomic Energy Agency (IAEA) within the framework of the activities of the EU/IAEA Joint Action². In particular, Croatia, the former Yugoslav Republic of Macedonia, Serbia and Montenegro were identified as priority countries for technical assistance support in order to reinforce the security of the premises where high-activity sources are used or stored. The screening of the situation regarding management of sealed radioactive sources existing in each Western Balkan country both in terms of regulations and practices has been extensively performed by the IAEA through the implementation of the EU/IAEA Joint Action. Of particular interest are the RaSSIA (Radiation Safety and Security Infrastructure Appraisal) reports which have been prepared by the IAEA for each Western Balkan country in 2005. Although these reports are focussing on regulatory aspects of the safety and security of management of sealed radioactive sources and on the compliance with the IAEA standards (BSS and GRS-1) and the guidance from the "Code of Conduct", they constitute a well documented source of information for any further technical assistance projects. Moreover, in some Western Balkan countries, the IAEA is supporting specific projects on improvement of the management of sealed radioactive sources. This means that a huge documentation has been collected and analysed by the IAEA on management of sealed radioactive sources both in terms of safety and security. Since information on the security aspects is by nature classified, it cannot be made available to third parties. Therefore it was deemed worthwhile to use the IAEA expertise in order to make a clear assessment of the technical assistance and investment needs of the IPA eligible countries on the specific issue of management of sealed radioactive sources in order to adapt their regulations and practices in line with the Euratom Directive 2003/122, best EU practices, international instruments and standards, and recommendations.

3.2 Assessment of project impact, catalytic effect, sustainability, and cross border impact:

This project will enable beneficiary countries to better understand what needs to be done to fully transpose into their legislation the acquis that is related to radiation protection and in particular the provisions of the Euratom Directive 2003/122, international instruments, standards and recommendations. It may also impact on the content of the technical assistance projects that should be implemented within the framework of the nuclear safety and radiation protection action

² Council Joint Action 2004/495/CFSP of 17 May 2004 on support for IAEA activities under its Nuclear Security Programme and in the framework of the implementation of the EU strategy against proliferation of weapons and weapons of mass destruction.

of the IPA regional programme from 2009 onwards. Full compliance of both regulatory and management practices with the Euratom Directive 2003/122 should decrease the risks of malicious use of sealed radioactive sources and illegal exportation into neighbouring countries. It will have therefore a positive cross border impact.

3.3 Results and measurable indicators:

- The regulatory framework currently in force in each of the six beneficiary countries on management of sealed radioactive sources including plans for possible improvements in the near future described;
- Current management practices for sealed radioactive sources in each of the six beneficiary countries described;
- Regulatory activities to establish and maintain inventory of radioactive sources and associated databases outlined;
- Regulatory activities to cope with orphan sources issues described;
- The particular situation regarding removal, dismantling, repackaging and storage of radioactive lightning rods in the relevant countries described as well as recommendations for a possible harmonised management route for that specific radioactive waste;
- The alignment of the regulatory framework in each beneficiary country on the Euratom Directive 2003/122, international instruments, standards and recommendations described;
- Current management schemes compared with best EU practices and international instruments, standards and recommendations;
- A list of possible topics (including an outline of the technical specifications for supply projects) for which improvement would be desirable is established;
- Areas for possible future IPA technical assistance are identified.

3.4 Activities:

- Analysis of the currently available documentation on the safety and security aspects of the regulatory control and the management of sealed radioactive sources in the six IPA eligible countries possibly supported by some expert missions on the spot;
- Analysis of the regulatory framework in force in the six IPA eligible countries with emphasis on progress made in the recent years;
- Analysis of the current management practices of sealed radioactive sources in each of the beneficiary countries;
- Analysis of the approach followed to establish a national inventory of radioactive sources and to develop an appropriate database;
- Analysis of the actions undertaken or planned to detect and retrieve orphan sources;
- Analysis of the different approaches already implemented or planned for the dismantling of radioactive lightning rods;
- Comparison of the existing national regulations on sealed radioactive sources with the requirements of the Euratom Directive 2003/122, international instruments, standards and recommendations;
- Comparison of existing management practices for sealed radioactive sources with best EU practices and international instruments, standards and recommendations;
- Preparation of possible future technical assistance and investment projects.

3.5 Conditionality and sequencing

N.A

3.6 Linked activities

Over the period 2001-2006 - within the framework of the Phare nuclear safety and the Transition Facility programmes - a number of projects have been programmed and launched on management of sealed radioactive sources, namely:

- Reconstruction of a hot cell for the characterisation and repackaging of sealed radioactive sources at the Richard repository in the Czech Republic (2001);
- Development of a radioactive waste tracking information system (covering notably sealed radioactive sources) in the Czech Republic (2001);
- Design of an additional waste disposal vault and integral storage facility for long-lived waste (in particular sealed radioactive sources) at Baldone in Latvia (2001);
- Supply of equipment for characterisation of institutional radioactive waste (notably sealed radioactive sources) and development of technical design for waste processing and storage facility at the Novi Han long-term storage facility in Bulgaria (2002);
- Assistance to regulatory activities of the Bulgarian Nuclear Safety Authority (BNSA) with regard to improving management of high-activity sealed radioactive sources (2002);
- Renovation and modernisation of the “hot cells” facility for sealed radioactive sources at the Josef Stefan Institute in Slovenia (2002);
- Dissemination of the results obtained within the EC-funded projects entitled “Management of spent sealed radioactive sources in Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia and Poland” (2002);
- Civil construction works for the establishment of radioactive waste processing plant and storage facility (in particular for sealed radioactive sources) for the Novi Han long-term storage facility in Bulgaria (2004);

In addition the IAEA notably through the EU/IAEA joint action has implemented a number of activities that are related to the safety and security of the management of sealed radioactive sources.

3.7 Lessons learned

Lessons learned from the Phare nuclear safety and Transition Facility programmes on management of sealed radioactive sources are as follows:

- Some regulatory bodies have experienced difficulties to transpose the Euratom Directive 2003/122 into their legislation/regulations due to the complexity of the issue;
- Supply of equipment and construction of appropriate facilities to characterise, re-package and store disused sealed radioactive sources was considered as a prerequisite to be in line with the provisions of the Euratom Directive 2003/122;
- Tracking and information systems for sealed radioactive sources may need specific development;
- Public acceptance problems arose in several countries (Lithuania and Bulgaria) following decisions to refurbish or construct modern facilities for the management of sealed radioactive sources.

4. Indicative Budget (amounts in €)

Activities	TOTAL COST	SOURCES OF FUNDING										
		EU CONTRIBUTION				NATIONAL PUBLIC CONTRIBUTION				PRIVATE		
		Total	% *	IB	INV	Total	% *	Central	Regional	IFIs	Total	% *
Activity 1												
Contract 1	260,000	260,000	100	260,000								
TOTAL	260,000	260,000	100	260,000								

* expressed in % of the Total Cost

5. Indicative Implementation Schedule (periods broken down per quarter)

Contracts	Preparation for tendering	Signature of Contribution agreement	Project Completion
Contract 1	N/A	Q4 2007	Q4 2009

6. Cross cutting issues**6.1 Equal Opportunity:**

N.A.

6.2 Environment:

There are substantial environmental gains to the beneficiary countries by accomplishment of this project since a better management of sealed radioactive sources including disused sources should decrease the risks of their malevolent use and thereby risks of contamination of the environment.

6.3 Minorities:

N.A.

ANNEXES

- 1- Log frame in Standard Format
- 2- Amounts Contracted and Disbursed per Quarter over the full duration of Programme
- 3 - Reference to laws, regulations and strategic documents
- 4- Details per EU funded contract

ANNEXES

ANNEX 1: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche Assessment of needs and proposed actions to strengthen the safety and security of sealed radioactive sources in Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo	Programme name and number: 2007/019-301	Part II of the Horizontal Programme on Nuclear Safety and Radiation Protection
	Contracting period expires: 30/11/2008	Disbursement period expires: 30/11/2011
	Total budget: €0.260 million	IPA budget: €0.260 million

Overall objective	Objectively verifiable indicators	Sources of Verification	
To improve the safety and security of radioactive of sealed radioactive sources in the beneficiary countries in line with the Euratom Directive 2003/122 and international instruments, standards and recommendations.			
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
To analyse safety and security aspects of the current management practices and regulatory control of sealed radioactive sources in Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo in order to identify possible areas for which improvement and/or optimisation in line with the Euratom Directive 2003/122, international	Recommendations listed in the final report	Production of progress and final reports resulting from the project implementation. Mission reports produced by the Contractor in the seven selected countries.	The relevant safety authorities in charge of the management of sealed radioactive source in the eight selected countries are supposed to fully collaborate to the project, providing all necessary information and data in particular on sources inventories and current management practices.

<p>Euratom Directive 2003/122, international instruments, standards and recommendations described;</p> <ul style="list-style-type: none"> • Current management schemes compared with best EU practices and international instruments, standards and recommendations; • A list of possible topics (including an outline of the technical specifications for supply projects) for which improvement would be desirable is established; • Areas for possible future IPA technical assistance are identified. 	<p>Progress, topical and final reports</p>		
Activities	Means	Costs	Assumptions
<ul style="list-style-type: none"> • Analysis of the currently available documentation on the safety and security aspects of the regulatory control and the management of sealed radioactive sources in the six IPA eligible countries possibly supported by some expert missions on the spot; • Analysis of the regulatory framework in force in the six IPA eligible countries with emphasis on progress made in the recent years; • Analysis of the current management practices of sealed radioactive sources in each of the beneficiary countries; • Analysis of the approach 	<p>Establishment of a Contribution Agreement with the International Atomic Energy Agency</p>	<p>€260,000</p>	

<p>followed to establish a national inventory of radioactive sources and to develop an appropriate database;</p> <ul style="list-style-type: none"> • Analysis of the actions undertaken or planned to detect and retrieve orphan sources; • Analysis of the different approaches already implemented or planned for the dismantling of radioactive lightning rods; • Comparison of the existing national regulations on sealed radioactive sources with the requirements of the Euratom Directive 2003/122, international instruments, standards and recommendations; • Comparison of existing management practices for sealed radioactive sources with best EU practices and international instruments, standards and recommendations; • Preparation of possible future technical assistance and investment projects. 			
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ANNEX II: Amounts (in €) Contracted and disbursed by quarter for the project

Contracted	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009
Contract 1		260,000								
Cumulated		260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000
Disbursed										
Contract 1		156,000		52,000		52,000				
Cumulated		156,000	156,000	208,000	208,000	260,000	260,000	260,000	260,000	260,000

Contracted	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Contract 1.1								
Cumulated								
Disbursed								
Contract 1.1								
Cumulated	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,00000

Annex III: Reference to laws, regulations and strategic documents:

- Nuclear Safety and Radiation Protection action of the multi-country MIPD programme
- Euratom Directive 2003/122;
- The Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management;
- The 1995 Law on radiation protection in **Albania**
- The Federal Law of Protection from Ionising Radiation and Radiation Safety (1999) of **Bosnia & Herzegovina**
- The Law on Radiation Protection and Radiation Safety and amendments (2001 and 2003) of the **Republic of Srpska of Bosnia & Herzegovina**;
- The Act on Protection Against Ionising Radiation 1999 and its 2003 amendment in **Croatia**;
- The Law on Protection against Ionizing Radiation and Radiation Safety (2002) in the **former Yugoslav Republic of Macedonia**;
- The draft Law on Radiation Protection and the Security of Radioactive Sources that will repeal Law 46/96 in **Montenegro**;
- The draft of the **Serbian** new Law on ionising radiation protection and on nuclear safety (2006) and existing **Serbian** Law on Protection against Ionising Radiation (1996);

Annexe IV: Details per EU funded contract

This project will be supported through a European Community Contribution Agreement with the IAEA in accordance with the FAFA.