

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:** Assistance to Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo (as defined by UNSCR 1244)¹ to enhance their capabilities to developing regulations on Naturally Occurring Radioactive Materials (NORM) and Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM)
- 1.3 ELARG Statistical code:** 06.64 - Nuclear Safety
- 1.4 Location:** Tirana (Albania), Sarajevo (Bosnia and Herzegovina), Zagreb (Croatia), Skopje (fYROM), 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.

1.6 Implementing Agency:

N.A.

1.7 Beneficiary:

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

Financing

- 1.8 Overall cost (VAT excluded):** €600,000
- 1.9 EU contribution:** €600,000
- 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 radiation safety and to strengthen the capacity of nuclear regulatory bodies.

2.2 Project purpose:

This project aims at helping regulatory bodies in the IPA eligible countries to develop specific regulations on the management of NORM and TENORM, notably on the basis of the EC recommendation (Radiation protection 122).

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), 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 with the acquis.
- In addition the AP with 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 and Turkey 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 NORM and TENORM in each of the six beneficiary countries abovementioned and on this basis at identifying those areas for which regulations have to be established and/or developed.

3. Description of project

3.1 Background and justification:

Naturally occurring radioactive material (NORM) may be present in a number of industrial activities, namely:

- Mining and milling of metalliferous and non-metallic ores;
- Production of non-nuclear fuels, including coal, oil and gas;
- Extraction and purification of water, for example for the generation of geothermal energy, as drinking and industrial process water, and in paper and pulp manufacture;
- Production of industrial minerals, including phosphate, clay and building materials;
- Use of radionuclides, such as thorium, for properties other than their radioactivity.

In addition, human activities that exploit these resources may lead to enhanced concentrations of radionuclides (often referred to as technologically enhanced naturally occurring radioactive

materials: TENORM). Such activities may include, for instance, the mining and processing of ores, the combustion of fossil fuels, or the production of natural gas and oil.

If these residues containing NORM and/or TENORM are not managed properly and safely, contamination over large areas is possible given the large quantities of such residues. Moreover under specific conditions they may significantly expose members of the public as well as workers to ionising radiation.

The issue of NORM and TENORM has been addressed by the International Atomic Energy Agency (IAEA) as well as by the European Commission through the publication of recommendations².

These have been the subject of technical assistance projects in Bulgaria and Romania within the framework of the Phare nuclear safety programme in 2005 and 2006.

In the Western Balkan countries there are industrial activities that may lead to the generation of NORM and TENORM and thereby to possible exposure of the members of the public. For instance, in Albania, near Tirana several dumps of slightly radioactive ashes generated by coal fired generating power plants were used in the technological production of certain building materials such as cement and concrete.

In the former Yugoslav Republic of Macedonia combustion of lignite gives rise to release into the atmosphere of NORM (uranium, thorium) that could pose health threats to the resident population. Moreover, there is speculation that radon could be emitted from the mass of ash, creating potential occupational health problems for the workers employed in the management and disposal of the ash.

Finally the process of artificial fertilizers production in the factory of the Chemical Industry Veles could also contribute to increase radiological risks.

It is likely that comparable radiological risks exist in the other Western Balkan countries since they all conduct industrial activities that may generate NORM and TENORM.

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

This project will enable beneficiary countries to have a better understanding of the radiological risks to man and the environment posed by the production of NORM and TENORM. The result of the project should impact on the regulations that are in force or planned on the management of slightly radioactive materials containing natural radionuclides. In this context, the beneficiary countries could make use of the guidance issued by the Group of Experts established under Article 31 of the Euratom Treaty that is reflected in the European Commission publication entitled "Radiation Protection 122; Practical Use of the Concepts of Clearance and exemption" - Part II "Application of the Concepts of exemption and Clearance to natural Radiation Sources". 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 of the IPA regional programme from 2009 onwards.

3.3 Results and measurable indicators:

- Methodology for acquiring comparable information and data on NORM and TENORM in each of the six IPA eligible countries established;
- Data analysed and compared;
- The regulatory framework currently in force on management of NORM and TENORM in

² Extent of Environmental Contamination by Naturally Occurring Radioactive Material (NORM) and Technological Options for Mitigation. IAEA technical report No 419 (December 2003)

Application of the Concepts of Exemption and Clearance to Natural Radiation Sources. European Commission, DG Env. Report "Radiation protection No 122 (2001)

each of the six beneficiary countries described including plans for possible improvements in the near future;

- Comprehensive inventory of sites and industrial activities in each of the six IPA eligible countries where NORM and TENORM issues are significant, established;
- The radiological situation - including exposure assessment for the critical groups of the population - for the most important activities generating NORM and TENORM in each country, assessed;
- The regulatory framework in force in a selection of EU Member States concerning management of NORM and TENORM, described;
- A list of regulatory improvement and/or development which would be desirable in each of the countries, established;
- Areas for possible future IPA technical assistance in this specific domain, identified.

3.4 Activities:

- Establishment of a methodology for the acquisition of coherent and comparable data on management of NORM and TENORM in the six beneficiary countries;
- Data collection and analysis;
- Identification of main regulatory differences and management practices between these countries;
- Analysis of the situation existing in each of the six IPA eligible countries concerning the sources of NORM and TENORM;
- Assessment of the radiological consequences of NORM and TENORM;
- Comparison with regulations and management practices in several EU Member States;
- Identification of the areas where regulatory improvements would be desirable;
- Preparation and practical organisation of a technical seminar where recommendations should be proposed in particular on future IPA technical assistance projects.

3.5 Conditionality and sequencing:

N.A.

3.6 Linked activities

The issue of NORM and TENORM has been the subject of two PHARE-funded projects programmed in 2005 and 2006 respectively in Romania and Bulgaria. The first significant results of the 2005 project in Romania should be made available in late 2007/beginning 2008. Coordination between all these projects including the present one will be performed in due time by the Commission services.

3.7 Lessons learned

Since the two PHARE projects on management of NORM and TENORM in Romania and Bulgaria have not yet started, there are no lessons to be learned at this stage.

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	600,000	600,000	100	600,000								
TOTAL	600,000	600,000	100	600,000								

* expressed in % of the Total Cost

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

Contracts	Preparation for tendering	Signature of contract	Project Completion
Contract 1	4Q 2007	2Q 2008	2Q 2009

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

N.A.

6.2 Environment:

There are substantial environmental gains to the beneficiary countries deriving from this project since a better control of the use of radionuclides may have a favourable impact on the protection 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

ANNEX 1: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche	Programme name and number: 2007/019-301	Part II of the Horizontal Programme on Nuclear Safety and Radiation Protection
Assistance to Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia including Kosovo to enhance their capabilities to developing regulations on Naturally Occurring Radioactive Materials (NORM) and Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM)	Contracting period expires: 30/11/2008	Disbursement period expires: 30/11/2011
	Total budget: €0.6 million	IPA budget: €0.6 million

Overall objective	Objectively verifiable indicators	Sources of Verification	
To improve radiation safety and to strengthen the capacity of nuclear regulatory bodies			
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
This project aims at helping regulatory bodies in the IPA eligible countries to develop specific regulations on the management of NORM and TENORM, notably on the basis of the EC recommendation (Radiation protection 122).	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 and/or supervising Ministries of the beneficiary countries are supposed to fully collaborate with the project, providing all necessary information.
Results	Objectively verifiable indicators	Sources of Verification	Assumptions
<ul style="list-style-type: none"> Methodology for acquiring comparable information and data on NORM and TENORM in each of the six IPA eligible countries established; Data analysed and compared; 	Progress and topical reports	Documentation available in the relevant Ministries and State organisations of the seven beneficiary countries and in the archives of DG ELARG/D3	

<ul style="list-style-type: none"> • The regulatory framework currently in force on management of NORM and TENORM in each of the six beneficiary countries described, including plans for possible improvements in the near future; • Comprehensive inventory of sites and industrial activities in each of the six IPA eligible countries where NORM and TENORM issues are significant established; • The radiological situation - including exposure assessment for the critical groups of the population - for the most important activities generating NORM and TENORM in each country assessed; • The regulatory framework in force in a selection of EU Member States concerning management of NORM and TENORM described; • A list of regulatory improvement and/or development which would be desirable in each of the countries established; • Areas for possible future IPA technical assistance in this specific domain identified. 	<p>Progress and topical reports</p> <p>Progress and topical reports</p> <p>Progress and topical reports</p> <p>Progress and topical reports</p> <p>Final report</p>		
<p>Activities</p>	<p>Means</p>	<p>Costs</p>	<p>Assumptions</p>
<ul style="list-style-type: none"> • Establishment of a methodology for the acquisition of coherent and comparable data on management of NORM and TENORM in the six beneficiary countries; • Data collection and analysis; • Identification of main regulatory differences and management 	<p>Service contract</p>	<p>€600,000</p>	

<p>practices between these countries;</p> <ul style="list-style-type: none"> • Analysis of the situation existing in each of the six IPA eligible countries concerning the sources of NORM and TENORM; • Assessment of the radiological consequences of NORM and TENORM; • Comparison with regulations and management practices in several EU Member States; • Identification of the areas where regulatory improvements would be desirable; • Preparation and practical organisation of a <u>technical seminar</u> where recommendations should be proposed in particular on future IPA technical assistance 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										
Cumulated				600,000	600,000	600,000	600,000	600,000	600,000	600,000
Disbursed										
Contract 1				360,000		120,000		120,000		
Cumulated				360,000	360,000	480,000	480,000	600,000	600,000	600,000

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	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000

DRAFT

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

- Nuclear Safety and Radiation Protection action of the multi-country MIPD programme;
- European Commission, report "Radiation Protection 122" (2001);
- IAEA technical report No 419 "Extent of environmental contamination by naturally occurring radioactive material (NORM) and Technological Options for mitigation" (2003);
- 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 **Republika 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 new **Serbian** 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

The Contractor is expected to fulfill all the activities listed in section 3.4 with the support of local companies established in each of the beneficiary countries. It is thought that the cost of the information to be collected and analysed in each country should range within €40,000 to €120,000 depending on the size of the country. The preparation of the technical seminar that will conclude the project should be financed through incidental expenditure (about €70,000).

The project will be tendered, awarded and implemented in accordance with the PRAG.