# <u>Project Fiche – 2009 IPA Horizontal Programme</u> on Nuclear Safety and Radiation Protection

#### 1. Basic information

**1.1 CRIS Number:** 2009/021-640

**1.2 Title:** Strengthening the system of dosimetry control

for occupationally exposed workers and patients

**1.3 ELARG Statistical code:** 03.64 - Nuclear safety

**1.4 Location:** Bosnia and Herzegovina, as well as Kosovo<sup>1</sup>

## **Implementing arrangements**:

#### 1.5 Contracting Authority:

The European Union represented by the European Commission for and on behalf of Bosnia and Herzegovina and Kosovo.

# 1.6 Implementing Agency:

Not applicable.

#### 1.7 Beneficiaries:

Bosnia and Herzegovina and Kosovo; and in particular:

Ms Draženka Malićbegović

# **Ministry of Civil Affairs**

Sector for Health

Trg BiH 1, 71000 Sarajevo

Bosnia and Herzegovina

Tel: 0038733492523 Fax: 0038733492621;

E-mail address: drazenka.malicbegovic@mcp.gov.ba

# Other beneficiaries from Bosnia and Herzegovina:

State Regulatory Agency for Radiation and Nuclear Safety of Bosnia and Herzegovina Ministry of Health of the Republic of Srpska, Ministry of Health of the Federation of Bosnia and Herzegovina.

Mr. Xhevat Pllana

## **Institute of Occupational Medicine**

15000-Obiliq

Kosovo

Phone: +381 38 561 695 Fax: +381 38 560 143 E-mail: info@imp-sha.com The National Agency for Radiation Safety (being established) Ministry of Environment and Spatial Planning Street Nazim Gafurri, 103 10000-Prishtina

Kosovo

Phone: +381 38 200 32 004 E-mail: belkize.ajdini@ks-go.net

## **Financing:**

1.8 Overall cost (VAT excluded)<sup>2</sup>: EUR 786 000

**1.9 EC contribution:** EUR 660 000

**1.10 Final date for contracting:** No later than 31 March 2013

**1.11 Final date for execution of contracts:** No later than 31 March 2015

**1.12 Final date for disbursements:** No later than 31 March 2016

# 2. Overall Objective

# 2.1 Overall Objective:

To improve health protection of individuals (members of the public, workers, and patients) against the dangers of ionising radiation.

## 2.2 Project purpose:

To improve the dosimetry control of exposed workers and patients to ionising radiation in medical and other establishments in Bosnia and Herzegovina and in Kosovo.

#### 2.3 Link with AP/NPAA/EP/SAA

# For Bosnia and Herzegovina

The Stabilisation and Association Agreement between Bosnia and Herzegovina, and the European Communities and the Member States, stipulates under Article 107 that "Cooperation shall focus on priority areas related to the Community *acquis* in the field of energy, including, as appropriate, nuclear safety aspects..."

## For Kosovo

The 2008/213/EC: Council Decision of 18 February 2008 on the principles, priorities and conditions contained in the European Partnership with Serbia including Kosovo as defined by United Nations Security Council Resolution 1244 of 10 June 1999 and repealing Decision 2006/56/EC, highlights the need to accede to the relevant international conventions relating to nuclear safety and to set up the appropriate regulatory body.

<sup>&</sup>lt;sup>1</sup> under UNSCR 1244/99

<sup>&</sup>lt;sup>2</sup> The total cost of the project should be net of VAT and/or other taxes. Should this not be the case, the amount of VAT and the reasons why it should be considered eligible should be clearly indicated

In addition the Kosovo 2008 Progress report states that there was so far no progress as regards nuclear safety/radiation protection. It considers that in the area of nuclear safety/radiation protection, basic rules need to be implemented and an appropriate and operational regulatory body needs to be set up. Important radiological issues in Kosovo include the management of sealed radioactive sources, environmental monitoring and radiation protection in the context of medical and industrial applications.

#### 2.4 Link with MIPD

The IPA Multi-beneficiary Multi-annual indicative Planning Document (MIPD) 2009-2011<sup>3</sup>, section 2.3.3.11 - Nuclear Safety and Radiation Protection, mentions that "all IPA eligible beneficiaries are facing radiological issues that are connected with the use of radionuclides for industrial and medical applications". It concludes that "radiological issues in the IPA beneficiaries should be addressed with the view to eventually transposing the acquis in the nuclear domain, including the international conventions to which the European Community is a party. This transposition would require a number of legislative and regulatory actions and would affect current management practices of radionuclides and radioactive materials".

#### 2.5 Link with National/Sectoral Investment Plan

Mid-term Development Strategy of Bosnia and Herzegovina (PRSP) 2004-2007 includes – among the others – Sector Priorities of *Health care*, *Environment* and *Information and Communication Technology*, precisely for the first two instances:

#### "V.3. SECTOR PRIORITIES – HEALTH CARE

- 1. Reform goals in the sector:
- 1.1. ensure a universally accessible, socially acceptable health care system based on the principles of solidarity and equity, ensuring access for various social groups (especially the poor) to a guaranteed basic package of health care rights and services,
- 1.2. ensure an efficient and transparent health care system focused on the promotion of health and the prevention of diseases,
- 1.3. ensure a quality-oriented system with constant improvement of the quality of health care and clinical supervision,
- 1.4. ensure a system focused on health care needs, actively involving the interests and opinions of both patients and medical workers."

# "V.7. SECTORAL PRIORITIES – ENVIRONMENT

- 1. Goals:
- 1.1. Implement Environment Protection Action Plan BiH (NEAP)"

#### 3. Description of project

# 3.1 Background and justification:

## Bosnia and Herzegovina

Until recently, legislation on monitoring of occupationally exposed workers to ionising radiation was covered by the regulations on limits of exposure laid down by the two

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<sup>&</sup>lt;sup>3</sup> C(2009)4518 of 16 June 2009

political entities of Bosnia and Herzegovina: the Federation of Bosnia and Herzegovina (FBH), and the Srpska Republic of Bosnia and Herzegovina (SR), namely:

- Regulations for Dose Limits (Official Gazette of FB&H No.8/04) and;
- Regulation on Dose Limits (Official Gazette of RS, No. 73/03).

In November 2007 a new national Law on Radiation Protection and Nuclear Safety (Official Gazette of Bosnia and Herzegovina, No. 88/07) was promulgated. Newly adopted regulations must be in line with the International Basic Safety Standards for Protection against Ionising Radiation, and with the Euratom Council Directives on radiation protection.

In the FBH, the Radiation Protection Centre (RPC) of the Institute of Public Health is an institution that provides personal dosimetry for workers exposed to ionising radiation. RPC provides assessment for external dose to nearly 1300 occupationally exposed workers from the FBH and to a lesser extent from the RS (~50) and from the Brčko District (~4). For approximately 500 workers, personal dosimetry service is currently provided outside of the country. The lack of appropriate dosimetry equipment cannot enable a comprehensive follow up of all workers potentially exposed to ionising radiation, which is estimated at present to 1800 in total for the whole country.

RPC carries out personal dosimetry monitoring using the 4500 Manual TLD Reader which provides readout of Harshaw TLD dosimeters. The reader has been used since 1998 and, at present, is not sufficient to cover the growing demands for personnel dosimetry monitoring. Apart from individuals that are not covered by dosimetry service, there is a need for additional dosimeters for professionals in interventional radiology and cardiology.

Existing procedures do not enable a full assessment of the occupational exposure of extremities of the body (e.g. hands, forearms, feet and ankles). Dosimetry of hands is recommended by the International Atomic Energy Agency (IAEA) for all nuclear medicine departments. Measurement of the ambient gamma dose-rate of controlled areas is not performed, again for lack of equipment.

The provisions of the Council Directive 96/29 Euratom and in particular Articles 23, 24 and 25 require the assessment and implementation of arrangements for the radiological protection of exposed workers (in this case, the personnel of controlled areas in medical establishments), and the monitoring of the work place as well as individual monitoring for exposed workers.

According to the provisions of Article 4 of the Council Directive 97/43 Euratom, "Member States shall promote the establishment and the use of diagnostic reference levels for radio diagnostic examinations, and the availability of guidance for this purpose having regard to European diagnostic reference levels where available".

Compliance with the provisions of both Council Directives can only be established if institutions from Bosnia and Herzegovina have proper equipment and educated personnel.

This project is intended to make the first steps for implementing these Council Directives via:

- Technical assistance to drafting diagnostic reference levels and protocols for patient dosimetry;
- Supply of appropriate dosimetry equipment;
- The setting up of a national database on occupational exposure;
- The organisation of a training course for the personnel of medical establishments

Diagnostic reference levels will be established for the most common diagnostic procedures such as: head, chest, LS spine, pelvis, intravenous urography, barium meal and barium enema. After dose assessment there will be a background for reduction of patient doses through implementing various procedures. Medical staff (radiologists and general practitioners) will be informed on doses and risks of radiological procedures. Patients will be able to know doses and risks associated with procedure before and after examination. This will be very helpful for accidently exposed pregnant patients.

#### Kosovo

In Kosovo, the Institute for Occupational Medicine (IOM) comprises a service dealing with radiation protection. This service is providing personal dosimetry for workers exposed to ionising radiation. IOM provides assessment for external dose to nearly 650 occupationally exposed workers. Actually more workers in Kosovo are exposed to ionising radiation since a number of private clinics using various X-ray machines are not yet registered.

IOM carries out personal dosimetry monitoring using an old "Toledo" Model 654 TLD reader, which provides readout of TLD dosimeters. The reader has been used since the eighties and at present does not work properly. The reader is not compatible with other systems, has a low sensitivity and is no more reliable. It cannot comply with the growing demands for personnel dosimetry monitoring.

Existing procedures in Kosovo do not enable a full assessment of the occupational exposure. Measurement of the ambient gamma dose-rate of controlled areas is not performed, again for lack of equipment.

The provisions of the Council Directive 96/29 Euratom and in particular Articles 23, 24 and 25 require the assessment and implementation of arrangements for the radiological protection of exposed workers (in this case, the personnel of controlled areas in medical establishments), and the monitoring of the work place as well as individual monitoring for exposed workers.

According to the provisions of Article 4 of the Council Directive 97/43 Euratom, "Member States shall promote the establishment and the use of diagnostic reference levels for radio diagnostic examinations, and the availability of guidance for this purpose having regard to European diagnostic reference levels where available".

Compliance with the provisions of both Council Directives can only be established if institutions from Kosovo have proper equipment and educated personnel.

This project is intended to make the first steps for implementing these Council Directives via:

- Technical assistance to drafting diagnostic reference levels and protocols for patient dosimetry;
- Supply of appropriate dosimetry equipment;
- The setting up of a national database on occupational exposure;
- The organisation of training courses for the personnel of medical establishments

The choice of Bosnia and Herzegovina and Kosovo as Beneficiaries of the project simply results from the fact that both Beneficiaries are placing dosimetry control as part of their priorities for 2009.

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

In terms of impact, the project should contribute to significantly decrease the individual and collective doses of the populations of Bosnia and Herzegovina, and Kosovo. It has a catalytic effect in the sense that as a result of the reliable assessment of the doses to workers and patients, appropriate measures should be taken to improve radiation protection in a number of industrial and medical establishments. It is sustainable since the persons to be trained will become afterwards themselves trainers. In addition, the sustainability is guaranteed by the necessity for these Beneficiaries to comply with the Euratom Council Directives on radiation protection. There is no direct cross border impact.

#### 3.3 Results and measurable indicators:

## Results in relation with activity 1:

- 1. External dose rates in a selection working places measured;
- 2. Diagnostic Reference Levels for radiodiagnostic examinations drafted;
- 3. Procedures for evaluation of patient doses drafted;
- 4. Database on doses received by patients and workers in medical establishments, operational;
- 5. Educational programme for personnel in charge of patient dosimetry in diagnostic radiology set up, and attendance certificates for trainees granted;
- 6. Technical specifications for the equipment drafted;
- 7. Equipment installed and in operation.

# Main indicator in relation with activity 1:

Dosimetry control of 1800 and 700 persons in Bosnia and Herzegovina and Kosovo respectively

# Results in relation with activity 2

The delivery of pieces of equipment in full compliance with the identification of the needs and the determination of technical specifications performed under activity 1.

# Main Indicator in relation with activity 2:

The Radiation Protection Centre (RPC) of the Institute of Public Health of the Federation of Bosnia and Herzegovina, and the Institute of Occupational Medicine in Kosovo are fully equipped to perform dosimetry control of their respective population

#### 3.4 Activities:

Activity 1: One service contract concerning technical assistance to be provided to the beneficiary institutions.

This activity will consist of assisting local experts in order to:

- 1.1. Assess doses of occupationally exposed workers in medical establishments (Bosnia and Herzegovina and Kosovo) including whole body and extremities dosimetry (Bosnia and Herzegovina);
- 1.2. Determine the time-temperature profile characteristics of automatic thermo luminescent dosimeters reader (Bosnia and Herzegovina);
- 1.3. Assess doses to patients (Bosnia and Herzegovina, Kosovo);
- 1.4. Establish a computerised database of professionally exposed workers (Bosnia and Herzegovina, Kosovo);
- 1.5. Draft the national reference levels for different categories of professionally exposed workers (nuclear medicine, radiology departments, etc) in Bosnia and Herzegovina;
- 1.6. Introduce patient dosimetry protocols in major hospitals of Bosnia and Herzegovina and Kosovo:
- 1.7. Establish Diagnostic Reference Levels (Bosnia and Herzegovina, Kosovo);
- 1.8. Build a national database of patient doses (Bosnia and Herzegovina, Kosovo);
- 1.9. Educate personnel in the field of patient dosimetry in diagnostic radiology (Bosnia and Herzegovina, Kosovo).
- 1.10. Identify the technical specifications of the equipment required to strengthen the system of dosimetry control for occupationally exposed workers and patients in Bosnia and Herzegovina and Kosovo

Activity 2: One supply contract for the delivery of equipment. A priori the following pieces of equipment would be needed:

- 2.1. One automatic thermo luminescent reader with internal irradiator and N2 generator and 2 desktop computers;
- 2.2. One manual thermo luminescent reader with internal irradiator and N2 generator and 2 desktop computers;
- 2.3. Thermo luminescent dosimeters for measuring whole body 2300 pieces, extremities 100 pieces and working place doses 100pieces;
- 2.4. Dose-area product meters (at least 24) used for direct patient dosimetry in radiographic, fluoroscopic and interventional procedures;
- 2.5. Advanced dosimetry equipment with multi-purpose detectors (at least 8);
- 2.6. Hardware and software for setting up a national database of patient doses.

However this list may be extended according to the results of activity No 1.

# 3.5 Conditionality and sequencing:

The implementation of this project requires a fully operational regulatory body in charge of radiological issues in Bosnia and Herzegovina and the establishment of a new one in Kosovo since part of the project will consist of drafting regulations on medical exposure. It is worth noting that by law a national nuclear regulatory agency exists in Bosnia and Herzegovina. Its full operation is expected to start by the end of 2009 once it is staffed. In Kosovo a law establishing a nuclear regulatory body should be promulgated by the end of 2009. This means that the Kosovar regulatory body could become fully operational by mid-2010, hence at the time of the launching of the tendering procedure.

Delivery of equipment for dosimetry monitoring must comply with the requirements of the regulatory body.

The supply contract should be launched six months after service contract.

## 3.6 Linked activities:

The project is linked to the IAEA project BOH 6011 "Strengthening Medical Physics Capacity in Diagnostic Radiology (Phase II)". This project is dealing with quality control and dosimetry in diagnostic radiology, as well as with education of medical physicists.

#### 3.7 Lessons learned

Since the implementation of the IPA horizontal programme on nuclear safety and radiation protection started only recently, there is no feed-back that could be used to implement this project. The experience of the IAEA in supporting nuclear projects in Bosnia and Herzegovina did not reveal any major difficulty during their implementation. However it is considered that the quality and the sustainability of the IAEA support could be further improved if a fully operational regulatory body would be in place.

# 4. Indicative Budget (amounts in EUR)

			SOURCES OF FUNDING									
			TOTAL EXP.RE	IPA EU CONTRIBUTION		NATIONAL CONTRIBUTION				PRIVATE CONTRIBU TION		
ACTIVITIES	I B (1)	IN V (1 )	EUR (a)=(b)+(c )+(d)	EUR (b)	%(2)	Total  EUR (c)=(x)+( y)+(z)	% (2)	Central EUR (x)	Re gi on al/ Lo cal E U R (y)	IFIS EUR (z)	EUR (d)	% (2)
Activity 1	х		250 000	250 000	100							
Contract 1 - Service	-	-	250 000	250 000	100							
Activity 2		Х	536 000	410 000	76.5	126 000	23.5	126 000				
Contract 2 - Supply	1	ı	536 000	410 000	76.5	126 000	23.5	126 000				
TOTAL IB		250 000	250 000	100								
TOTAL INV		536 000	410 000	76.5	126 000	23.5	126000					
TOTAL PROJECT		786 000	660 000	84	126 000	16	126 000					

Amounts net of VAT

- (1) In the Activity row use "X" to identify whether IB or INV
- (2) Expressed in % of the **Total** Expenditure (column (a))

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

Contracts	Start of	Signature of	Project
	tendering	contract	Completion
Contract 1 – Service	Q4 2010	Q4 2011	Q4 2013
Contract 2 – Supply	Q4 2012	Q1 2013	Q4 2013

# 6. Cross cutting issues

# **6.1** Equal Opportunity

The project will benefit both women and men through improvements in environmental protection and safety.

The issue of access is mainstreamed into the project and the design at the territorial level allows for a more targeted equal opportunity framework for addressing different medical and other establishments, as well as patients in general, thus giving equal opportunity to everybody to get adequate information before and after exposure.

On all activities, both men and women will have equal opportunities to compete for contracts and to work on any related activities.

## **6.2** Environment

There are substantial environmental gains to the Beneficiaries by accomplishment of this project since an improvement of the dosimetry control of exposed workers and patients to ionising radiation in medical and other establishments should alert on doses and risks associated with radiological procedures and thereby reduce the risk of environmental contamination in general.

# 6.3 Minorities

On all activities, minorities will have equal opportunities to compete for contracts and to work on any related activities.

# **ANNEXES**

- I- Logical framework matrix in standard format
- II- Amounts (in EUR) contracted and disbursed per quarter over the full duration of the project
- III- Description of Institutional Framework
- IV Reference to laws, regulations and strategic documents
- V- Details per EC funded contract

ANNEX 1: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche	Programme name and number – 2009 IPA Horizontal Programme on Nuclear Safety and Radiation Protection – 2009/021-640	
Strengthening the system of dosimetry control for occupationally exposed workers and patients		Disbursement period expires – No latet than 31 March 2016
	Total budget: EUR 786 000	IPA budget: EUR 660 000

Overall objective	Objectively verifiable	Sources of	
To improve health protection of individuals (members of the public, workers, and patients) against the dangers of ionising radiation.	indicators  Nuclear regulatory bodies in Bosnia and Herzegovina, and in Kosovo report on improved system of protection	Verification  Nuclear regulatory bodies in Bosnia and Herzegovina, and in Kosovo IAEA reports European Commission reports	
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
To improve the dosimetry control of exposed workers and patients to ionising radiation in medical and other establishments in Bosnia and Herzegovina and in Kosovo.	Nuclear regulatory bodies in Bosnia and Herzegovina, and in Kosovo report on reduced exposure of workers and patients	Nuclear regulatory bodies in Bosnia and Herzegovina, and in Kosovo Institutes of Public Health in Bosnia and Herzegovina, and in	
Results	Objectively verifiable	Kosovo  Sources of	Assumptions
	indicators	Verification	•
Results and measurable indicators in relation with activity 1:  1. External dose rates in a selection working places measured;  2. Diagnostic Reference Levels for radiodiagnostic examinations drafted;  3. Procedures for evaluation of patient doses drafted;  4. Database on doses received by patients and workers in medical establishments, operational;	Dosimetry control of 1800 and 700 persons in Bosnia and Herzegovina and Kosovo respectively  The Radiation Protection Centre (RPC) of the Institute of Public Health of the Federation of Bosnia and Herzegovina, and the Institute of Occupational Medicine in Kosovo are fully equipped to perform dosimetry control of their respective population	Progress reports  Nuclear regulatory bodies in Bosnia and Herzegovina, and in Kosovo Institutes of Public Health in Bosnia and Herzegovina, and in Kosovo  Institutes of Public Health in Bosnia and	Nuclear regulatory bodies must be operational
<ul> <li>5. Educational programme for personnel in charge of patient dosimetry in diagnostic radiology set up, and attendance certificates for trainees granted;</li> <li>6. Technical specifications for the equipment drafted;</li> </ul>	Equipment delivered as per contract	Herzegovina, and in Kosovo  European Commission HQ in Brussels for procurement	Availability of the personnel to attend training courses

7. Equipment installed and in operation.		European Commission HQ in Brussels for procurement Reports of visits of the premises of the Institutes	Successful tendering procedure
Results and measurable indicators in relation with activity 2: The delivery of pieces of equipment in full compliance with the identification of the needs and the		where the equipment has been delivered	
determination of technical specifications performed under activity 1.		Co-financing provided by the beneficiary countries through the funding of some	
Activities	Means	specific equipment  Costs	Assumptions
Activity 1: Technical assistance 1.1 To assess doses of occupationally exposed workers in medical establishments (Bosnia and Herzegovina and Kosovo) including whole body and extremities dosimetry (Bosnia and Herzegovina);	Service contract	EUR 250 000	
1.2 To determine the time-temperature profile characteristics of automatic thermo luminescent dosimeters reader (Bosnia and Herzegovina);			
1.3 To assess doses to patients (Bosnia and Herzegovina, Kosovo);			
1.4 To establish a computerised database of professionally exposed workers (Bosnia and Herzegovina, Kosovo);			
1.5 To draft the national reference levels for different categories of professionally exposed workers (nuclear medicine, radiology departments, etc) in Bosnia and Herzegovina;			
1.6 To introduce patient dosimetry protocols in major hospitals of Bosnia and Herzegovina and Kosovo;			
1.7 To establish Diagnostic Reference Levels (Bosnia and Herzegovina, Kosovo);			
1.8 To build a national database of patient doses (Bosnia and Herzegovina, Kosovo);			
1.9 To educate personnel in the field of patient dosimetry in diagnostic radiology (Bosnia and Herzegovina, Kosovo).			
1.10 Identify the technical specifications of the equipment required to strengthen the system of dosimetry control for occupationally exposed workers and patients in Bosnia and Herzegovina and Kosovo			
Activity 2: Supply of equipment 2.1 One automatic thermo luminescent reader with internal irradiator and N2 generator and 2 desktop computers;	Supply contract	Total EUR 536 000  EC funded: EUR 410 000	Co-financing is provided by the beneficiaries (Bosnia and Herzegovina –
2.2 One manual thermo luminescent reader with internal irradiator and N2 generator and 2 desktop computers;			EUR 96 000 and Kosovo EUR 30 000) to purchase part of the listed equipment and
2.3 Thermo luminescent dosimeters for measuring whole body 2300 pieces, extremities 100 pieces and working place doses 100pieces;			may be others
2.4 Dose-area product meters (at least 24) used for direct patient dosimetry in radiographic, fluoroscopic and interventional procedures;			
2.5 Advanced dosimetry equipment with multi-purpose			

detectors (at least 8);		
2.6 Hardware and software for setting up a national database of patient doses.		

ANNEX II: Amounts (in EUR) contracted and disbursed by quarter for the project (EC funds)

Contracted	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013
Contract 1 - Service	250 000								
Contract 2 – Supply						410 000			
Cumulated	250 000	250 000	250 000	250 000	250 000	660 000	660 000	660 000	660 000
Disbursed									
Contract 1 - Service	100 000				50 000				100 000
Contract 2 - Supply					300 000				110 000
Cumulated	100 000	100 000	100 000	100 000	450 000	450 000	450 000	450 000	650 000

## **ANNEX III: Description of Institutional Framework**

#### Bosnia and Herzegovina

The new Law on Radiation Protection and Nuclear Safety in Bosnia and Herzegovina plans the establishment of a "state regulatory agency for radiation protection and nuclear safety with appropriate set of functions and responsibilities, and resources required for the establishment of regulatory control". According to article 26 of this Law, "within six months after this Act enters into force, the regulatory agency shall issue the regulations on radiation safety and nuclear safety, radioactive waste management, and on safe transportation of radioactive substances". This scope of the Law should cover both political entities, i.e. the Federation of Bosnia and Herzegovina and the Republic of Srpska of Bosnia and Herzegovina. This agency should therefore be fully operational when the project starts, i.e. during the 3<sup>rd</sup> Q of 2010. Under Article 2, it is stated that the purpose of the Law is to: "establish and maintain a regulatory programme for ionising radiation sources, and thereby ensure compatibility with international standards on safety of radiation sources and for protection against ionising radiation".

# <u>Kosovo</u>

According to provisions of the draft Law on protection against non-ionised, ionised radiation and nuclear security, management of radionuclides should be regulated by the Ministry of Environment and Spatial Planning. In principle this Law is expected to be promulgated in 2009.

# ANNEX IV: Reference to laws, regulations and strategic documents

# Bosnia and Herzegovina

Law on Radiation Protection and Nuclear Safety in Bosnia and Herzegovina

#### Kosovo

Since the early 90's there has been no legal system in place concerning nuclear safety and radiation protection in Kosovo. Some regulations exist but are limited to application of ionising radiation in medical establishments (Administrative Instruction 03/2007 on application of ionised and non-ionised radiation in health).

# **ANNEX V: Details per EC funded contract**

Contract 1: A service contract for an amount of EUR 250 000 will be concluded following a tender that will be launched in Q4 2010. The Contractor is expected to fulfil all the subactivities listed in section 3.4 for activity 1 with the support of relevant organizations established in Bosnia and Herzegovina and Kosovo.

Contract 2: A supply contract for an amount of EUR 410 000 will be concluded following a tender that will be launched in Q4 2012. Co- financing from the national budget of Bosnia and Herzegovina (EUR 96 000) and Kosovo (EUR 30 000) should be made according to the IPA rules.

Activities 1 and 2 of the project will be tendered, awarded and implemented in accordance with the PRAG.