

## **Standard Summary Project Fiche – IPA centralised programmes**

### **Project number 31: Treatment of Healthcare Waste**

#### **1. BASIC INFORMATION**

**1.1 CRIS Number:** 2008/020-406

**1.2 Title:** Treatment of Healthcare Waste

**1.3 ELARG statistical code:** 03.27

**1.4 Location:** Republic of Serbia

#### **Implementing arrangements:**

**1.5 Contracting Authority:** EC Delegation to the Republic of Serbia

**1.6 Implementing Agency:** EC Delegation to the Republic of Serbia

**1.7 Beneficiary** (including details of project manager):

Project Manager: the State secretary for health

A Steering Committee will provide continuous guidance on strategic project developments.

#### **Financing:**

**1.8 Overall cost:** 6,000,000 EUR

**1.9 EU contribution:** 6,000,000 EUR

**1.10 Final date for contracting:** 3 years after signature of the Financing Agreement

**1.11 Final date for execution of contracts:** 5 years after signature of the Financing Agreement

**1.12 Final date for disbursements:** 6 years after signature of the Financing Agreement

#### **2. OVERALL OBJECTIVE AND PROJECT PURPOSE**

##### **2.1 Overall Objective**

To contribute to the implementation of environmental and healthcare strategies that will ensure compatibility with EC legislation and best practices in sanitary standards.

##### **2.2 Project purpose**

To improve infectious healthcare waste management in 35 healthcare facilities in Serbia<sup>1</sup> by completing the system for collection, storage, treatment and disposal of infectious healthcare waste as initiated under a CARDS Healthcare waste management project.

##### **2.3 Link with AP/NPAA / EPI/ SAA**

AP/NPAA not applicable

The November 2007 Council Decision of on the principles, priorities and conditions contained in the European Partnership, under “Employment and social policies” cites the following:

– *Develop adequate administrative structures and capacity in the field of health protection.*

The Action Plan for implementation of the European Partnership shows a number of relevant priorities. While few appear precisely targeted to this subject, which falls between a number

---

<sup>1</sup> The 35 healthcare facilities in Serbia are: 23 Institutes of Public Health and 12 Veterinary Institutes located in 25 administrative districts in Serbia, the Veterinary faculty (1) and the social institutions (9).

of defined areas, it is clear from examining associated subjects that the objectives of this project are important in this context.

Under Agriculture and Fisheries medium-term priorities, point 7.2.8 reads: *“To upgrade waste management”*.

Under Environment, short-term priorities, point 7.3.2: *“Adopt and begin implementing the National Environmental Protection Strategy”*. This strategy is based on objectives, some of which address the purpose of this project.

Environment, short-term priorities, point 7.3.6 mentions: *“Start construction of a facility for the treatment and safe disposal of hazardous waste”*. While this facility is not the precise target of this project, it is closely related to it. In the absence of such a treatment/disposal facility (which has been delayed and may expect further delays due to the difficulty of agreeing to a specific location) this project is essential in providing a solution to an important part of an acute problem.

Environment, medium-term priorities, point 7.3.11: *“Adopt and start implementing strategies on air pollution, waste, management and environmental protection”*. This project addresses the implementation of a waste management strategy.

Human rights and protection of minorities, point 3.1.1: *“Ensure uniform effective implementation of obligations arising out of membership of the Council of Europe....notably with regard to the European Convention on Human rights and fundamental freedoms...”*. If we consider the right to life as the most fundamental freedom, then it is of highest priority to reduce the appalling risks presently run by poverty-driven dumpsite scavengers. These people, often children and often of the Roma ethnic minority, currently face lethal hazards in their everyday lives that can relatively easily be controlled through the proposed project.

## **2.4 Link with MIPD**

The MIPD section 2.2.3.1, European Standards, Main priorities and objectives shows the following:

*“Supporting the development and implementation of sectoral strategies and policies compatible with EC internal market legislation and best practices in areas such as .... sanitary standards...”*.

*“Environment: Support to the approximation and implementation of Environmental legislation and related strategies; support to environmental authorities at all levels in terms of project preparation, management, planning, permitting, inspecting, and monitoring; support to local infrastructure investments including environmental information systems, solid waste, regional landfills, water and sewage.”*

This project will substantially advance the implementation of sectoral strategy in the field of sanitary standards in the primary healthcare sector, and improve the security of solid waste disposal sites across Serbia.

## **2.5 Link with National Development Plan (where applicable)**

N/A

## **2.6 Link with national / sectoral plans**

The National Waste Management Strategy, in accordance with EU regulations, represents a basic document providing conditions for rational and sustainable waste management throughout the Republic of Serbia. This strategy requires the improvement of healthcare waste management.

The Government adopted the National Solid Waste Management Strategy in Serbia on 5<sup>th</sup> July 2005 setting up long-term activities.

The postulates of the Hazardous Waste Management Strategy, adopted in 2003, will be observed during this project. The Strategy will be supported by sub-law documents to be soon published in the Official Gazette .

The National Environmental Strategy raises the issue of improper medical/healthcare waste management (harmonized with EU classification of waste).

### **3. DESCRIPTION OF PROJECT**

#### **3.1 Background and justification:**

##### ***Background***

The health status of Serbia's population is comparable with the one in other Central and Eastern European Countries, but below that of Western Europe. Life expectancy at birth in Serbia is 70 years for men and 75 for women<sup>2</sup>.

Serbia has an extensive network of public health facilities that in principle provides free health care for all citizens, and a parallel private sector that is poorly regulated and serves only a small, but rising, percentage of the population. There is considerable inefficiency in the system. Serbia has a health system financed by earmarked payroll contributions to the National Health Insurance Fund (HIF), as well as out-of-pocket payments to private healthcare providers. Providers are mostly public and contracted by the HIF. The viability of the system is challenged by the reduced financial basis of health insurance contributions and transparency of both public and private sector (2 million employed financing 7 million insured).

According to the 2006 Decree on Health Institutions, there are 343 health institutions at different levels of care: 208 at primary, 76 at secondary, 27 at tertiary and 32 which cross more than one level of care. There is almost 113,000 permanent staff working in the public health care provider network in Serbia (according to the Institute of Public Health database of June 2006).

The ongoing health care reform includes the hospital sector. The European Investment Bank is currently funding the refurbishment of the regional hospitals and the clinical centres of Serbia to the tune of 250 million Euro. The EU, through the European Agency for Reconstruction is providing technical assistance to these investment programmes. The 2005 Health Law decentralises primary health care services to municipal level and begins a trend of decentralisation of services that is likely to continue.

The issue of medical/healthcare waste management in Serbia has been continuously raised, but until recently, action was confined to a series of foreign donor supported studies. Healthcare waste is produced in healthcare facilities in uneven quantities, depending on the type of facility, number of beds, diseases treated and types of medical services performed.

##### ***Justification***

Infectious waste is defined as waste that can cause infectious diseases. According to World Health Organization (WHO) definition, healthcare waste denotes any waste composed partially or entirely of:

- Human and animal tissues
- Blood and other bodily fluids
- Excretions and secretions
- Medicines and other pharmaceutical preparations
- Swabs, pads, gauze, bandages, etc.
- Needles, surgical blades, lancets and other sharp instruments
- Any other waste originating from practices of medicine, dentistry, veterinary medicine, pharmacy or similar practices, research, treatment, protection or drawing of blood for transfusions, and which could infect a person coming into contact with them.

EC law requires that infectious waste must be treated and decontaminated before disposal (Directive 99/31/EC). In view of the quantity which originates in Serbian health care

---

<sup>2</sup> WHO 2004 data.

institutions and the level of potential hazard, infectious and potentially infectious waste is of paramount importance.

Infectious waste forms approximately two thirds of hazardous healthcare waste, the rest consisting of sharp instruments, radioactive waste, pharmaceutical waste, chemical and patho-anatomical waste.

Sharps may be contaminated and as such pose a significant risk. In most cases these are disposed of in empty plastic saline solution bottles filled with disinfectants. Only a small number of healthcare facilities sterilise such waste, most frequently in autoclaves which are very old. After sterilisation, sharps are placed in plain containers for municipal waste. Used needles and syringes, cotton balls, dressings, etc. are deposited at the official landfill of municipal waste.

The current practice of mixing healthcare waste with municipal waste in improperly run landfills can rapidly propagate disease through micro-organisms airlifted through smouldering emissions, unaware individuals picking or scavenging through landfill waste and burrowing animals and birds. Most of the Republic's landfills do not yet bury waste daily according to good landfill practice, or segregate healthcare waste from municipal waste. Finally, many landfills have uncontrolled access and many often burn uncontrollably.

Waste from IPHs and Veterinary Institutes poses significant health and hygienic risks to healthcare staff, patients and persons engaged in the collection, storage and disposal of healthcare waste, and to those that poverty forces to make a living scavenging waste dumps.

The following specific problems have been noted:

- There is a lack of equipment for the sterilisation of waste.
- There is inadequate storage of infectious waste in hospital premises
- Adequate facilities for processing infectious waste in accordance with valid international standards do not exist. There is no general nor specialised hazardous waste disposal and treatment facility in Serbia.
- There is a lack of specialised means of transport of hazardous healthcare waste.
- Untreated infectious waste is disposed of together with other communal waste - adequate secure sections of communal landfills do not exist.

In this respect, the currently ongoing CARDS project focuses on the treatment of infectious healthcare waste with the provision of a number of systems to treat infectious healthcare waste across Serbia. The project also includes a capacity building component and the following documentation as well as an extensive training programme is anticipated from the ongoing project:

- National Guideline for the Safe Management of Healthcare Waste
- National Guideline for the safe management of Animal Healthcare Waste
- Sub Law on the Management of Healthcare Waste
- Sub Law on the Management of Pharmaceutical Waste
- Healthcare Waste Management Plans for Healthcare Institutions

In addition the project developed an operational system for the management of infectious healthcare waste based on the current administrative districts of Serbia. This model consists of a series of Local and Central Treatment Points that have received equipment from the project. These facilities will be collectively responsible for the management of waste within their administrative districts. Through a separate supply contract, the EU provided some specially adapted vehicles for transportation to facilitate this process.

Not only is the waste sterilised by the provision of autoclave technology but it is thereafter shredded to reduce the risk posed by sharps and other light metal-type wastes. This is particularly important for those individuals employed, and at landfill sites across Serbia.

The EU-funded assistance via the CARDS project "Technical Assistance for Healthcare Waste Management" consists of support for preparing a plan and system for Healthcare

Waste Management, situation analysis in 71 health care institutions in Serbia and equipment procurement. It has partially solved the problem of infectious waste inactivation, providing technical assistance and procurement of equipment for this field. It will end in June 2009, and continued support for healthcare waste management improvement is needed to validate, consolidate and extend the effects of the programme.

The project was limited in its scope due to the quantity of equipment provided in the relevant supply tender. It was able to ensure the treatment of infectious healthcare waste from healthcare facilities that are the largest producers within each district. The CARDS Project mainly covered general hospitals, partially clinical centres, and the main buildings of all primary healthcare centres (*Dom zdravlja*) as part of the network in Serbia. One of the problems that could not be rectified was related to the provision of necessary capacity for the sterilisation of infectious healthcare waste in the City of Belgrade (17 municipalities and more than 40 healthcare facilities<sup>3</sup>). Similar problems occurred in all cities with tertiary healthcare institutions and within some districts with specific geographical constraints (Vranje, Prijepolje, Uzice, Novi Pazar).

The real needs of the infectious healthcare waste management system in the Republic of Serbia will be significantly improved by the IPA Programme resources.

#### **SUMMARY OF THE NEEDS OF HEALTHCARE WASTE SYSTEM IN SERBIA (basic needs)**

|                                        | <b>Overall needs</b>                                                                                                                                                                                       | <b>CARDS 2004</b>                                                                                          | <b>Remaining</b>                       |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Autoclaves and shredders               | 123                                                                                                                                                                                                        | 78 of each                                                                                                 | 45 of each                             |
| Vehicles (small van)                   | 72                                                                                                                                                                                                         | 25                                                                                                         | 47                                     |
| Vehicles (larger van for regional use) | 10                                                                                                                                                                                                         | 0                                                                                                          | 10                                     |
| Special secure storage                 | - Temporary storage places in healthcare institutions for the disposal of collected infectious healthcare waste to be provided (Financial investments are needed- to be provided by healthcare facilities) | Supported development of internal "hospital" area for the temporary storage of infectious healthcare waste | Some storage areas yet to be developed |
| Training                               | - 60% of healthcare staff to be trained for healthcare waste management                                                                                                                                    | 30% of healthcare staff trained in healthcare waste management skills                                      | Remaining 30% to be trained            |
|                                        | - Training for drivers of vehicles in ADR regulations for management of infectious healthcare waste<br>- Training of operators to operate autoclaves and shredders                                         | Training provided where installations made                                                                 | Training with new installations        |
| Awareness raising activities           | - Comprehensive professional public awareness campaign                                                                                                                                                     | - printed material , very limited number of printed IEC material (information, education, communication)   | - needs to be developed                |

---

<sup>3</sup> Healthcare facilities – HCFs.

### **3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact (where applicable)**

#### **Impact**

By 2013, no untreated healthcare infectious waste will be disposed of directly to landfills in the Republic of Serbia.

The risk of infection for health care workers, transporters, other employees and citizens who frequent rubbish dumps will be significantly reduced.

As the project provides for improved disinfection it will reduce air pollution through eliminating the need for incineration within the grounds of healthcare facilities as a disposal route, since there is currently no adequate system for controlling air pollution.

In summary the project will result in an improvement in local air quality and will also improve local environmental/public health quality by stopping the transportation and disposal of large quantities of infectious material within the communities around healthcare facilities.

#### **Sustainability**

Sustainability of the infectious waste management system will be underpinned by the Ministry of Health in cooperation of the Health Insurance Fund. By defining the price of the service of infectious waste sterilisation and by entering the market it would be possible to have a sustainable system and safe environment.

- Financial sustainability will be solved by MoH and Health Insurance Fund/HIF, and costs of the new system will be paid by HIF/MoH, particularly for the services/running costs/maintenance of the delivered equipment needed for the treatment of the infectious healthcare waste.
- The Project will become a part of the institutional capacity of Institutes of Public Health<sup>4</sup> and Veterinary Institutes as one of the important objective of MoH.
- Policy level sustainability will be almost in place before this project will start (mandatory documents of MoH concerning management of infectious healthcare waste, decree on healthcare waste management, national guideline for the healthcare waste management, sub law on healthcare waste management etc.)
- There will be activities planned to be implemented by the project concerning 'how to' and 'good practice' manuals, training of trainers etc.
- This project will support implementation of the same model of healthcare management that is ongoing process now within general hospitals, primary health centres, and clinical centres.
- Key public institutes will be engaged to implement the healthcare waste management activities including development districts plans for the infectious healthcare waste management.

The project will result in a significant improvement in cooperation between the Ministry of Health, Veterinary Directorate, and Ministry of Environmental Protection in the specific area of safe management of infectious waste.

### **3.3 Results and measurable indicators**

**Result 1:** Uniform procedures for safe infectious healthcare waste management in 25 districts in place.

**Result 2:** More than 60% of total IPH and Veterinary Institute staff in all 25 health districts educated and trained to perform healthcare waste management activities in accordance with the EU legislation and best practice guidelines.

**Result 3:** Improved technical capacities of HCFs for the treatment of infectious healthcare waste in 23 IPHs and 12 veterinary institutes.

---

<sup>4</sup> Institute of Public Health - IPH

**Measurable indicators** that can show progress towards these results include:

**Result 1:**

- Number of facility and district waste management plans drafted and adopted.
- Number of districts and institutions with uniform posts and job descriptions for healthcare waste staff in place
- Number of healthcare waste staff in place

**Result 2:**

- Number of educated and trained staff performing healthcare waste management activities in accordance with the EU legislation and best practice guideline in 35 HCFs
- Quality of segregation practice in HCFs at the point of source
- Quality of working practice when handling waste
- Frequency of needle sticks
- Ability of employees to maintain and operate HCWM equipment

**Result 3:**

- Number of vehicles procured and put into service
- Number of autoclaves procured and put into service
- Number of shredders procured and put into service

### **3.4 Activities**

**Activities related to result 1:**

- 1.1 Assist HCFs and districts in developing waste management plans
- 1.2 Produce job descriptions for waste handlers (waste technician, waste officer, waste manager) and assist with hiring the said staff in 35 HCFs
- 1.3 Assist in defining financial and legislative arrangements for the functioning of the system and implementation in 35 HCFs
- 1.4 Support an information and awareness programme for the professional community on health, safety, and environmental issues relating to healthcare waste.

**Activities related to result 2:**

- 1.5 Develop the training curriculum and training plan
- 1.6 Select trainees
- 1.7 Organise training sessions
- 1.8 Evaluate of trainings
- 1.9 Coach trainees on the job after training

**Activities related to result 3:**

- 1.10 Develop the tender dossiers
- 1.11 Conduct the tender processes
- 1.12 Distribute the equipment and ensure installation

**Contracting Arrangement:**

The project will be implemented through one service contract for technical assistance, and two supply contracts (one for waste treatment equipment and one for vehicles).

### **3.5 Conditionality and sequencing:**

**Conditionality**

The project is conditional on a successful finalisation of the ongoing CARDS project.

The Ministry of Health has committed itself to finding financial resources for the procurement of the necessary consumables and auxiliary materials for the adequate collection and treatment of infectious healthcare waste. The provision of such materials is a condition for correct functioning of the systems to be established.

### **Sequencing**

The first year will be used to form the teams, establish partnerships at local and central levels, develop training standards and training packages, and the commencement of the project as per selected, district model. The first year will be used for the procurement (tendering procedures), scaling up, as well as mid-term review of the project. Project monitoring and interim reporting will be continuously done throughout the project.

The autoclaves, shredders and vehicles should be available to complete training. Part of the training can however be carried out using installations already established through the CARDS project.

Given that equipment of the same technical specifications was procured through the CARDS project, preparation of the tender dossiers should proceed rapidly.

### **3.6 Linked activities**

The World Bank has provided assistance in preparing a Plan for Managing Healthcare Waste for four hospitals included in restructuring (Valjevo, Zrenjanin, Kraljevo and Vranje), and for two of them rooms for waste storage were provided (Zrenjanin and Vranje).

The city of Belgrade, Secretariat for Environmental Protection, Health Secretariat, in cooperation with the City Public Health Institute have initiated a program for solving healthcare waste issues on the territory of the city of Belgrade, and in this context a Guide for Healthcare Waste Management for the city of Belgrade has been prepared.

The project is linked with other ongoing projects supported by Ministry of Health (project activities funded by World Bank loan), and bilateral partners' activities, e.g. activities of the City Parliament of Belgrade and Novi Sad. The knowledge and experience gained through the implementation of these projects will provide abundant resources for the proposed activities. It also builds on the previous achievements and projects, such as the *CARDS Technical Assistance for Healthcare Waste Management*, and by HIV prevention programmes in the community, which significantly contributed to a decrease in HIV infection level and planned activities for the handling of infectious waste generated at hospital wards at which HIV/AIDS patients are treated.

### **3.7 Lessons learned**

The key lesson learned from ongoing projects in Serbia is that substantial changes in professional practices concerning healthcare waste handling are time consuming since people have to see the necessity of those changes.

After years spent on raising awareness related to the importance of proper infectious healthcare waste management, all partners and stakeholders, international organizations and NGOs are ready to put in place the needed changes in daily practice. Those changes are usually slow and therefore the organisation, coordination and further advocacy effort is needed.

Resistance to change, which is always an integral part of reforms, is decreasing. One of the reasons for such a situation relates to activities of the Ministry of Health undertaken in cooperation with the EAR and the City Parliament to improve awareness raising of the members of the staff and development of sub-laws as tools for the implementation of the described activities that are mandatory for all healthcare activities in both human and veterinary medical sectors.

#### 4. INDICATIVE BUDGET (AMOUNTS IN EUR)

|                      |           |            | TOTAL<br>EXP.RE        | SOURCES OF FUNDING            |                       |                                 |          |                       |                                  |                         |            |          |
|----------------------|-----------|------------|------------------------|-------------------------------|-----------------------|---------------------------------|----------|-----------------------|----------------------------------|-------------------------|------------|----------|
|                      |           |            |                        | IPA COMMUNITY<br>CONTRIBUTION | NATIONAL CONTRIBUTION |                                 |          |                       |                                  | PRIVATE<br>CONTRIBUTION |            |          |
| ACTIVITIES           | IB<br>(1) | INV<br>(1) | EUR<br>(a)=(b)+(c)+(d) | EUR<br>(b)                    | %<br>(2)              | Total<br>EUR<br>(c)=(x)+(y)+(z) | %<br>(2) | Central<br>EUR<br>(x) | Regional/<br>Local<br>EUR<br>(y) | IFIs<br>EUR<br>920      | EUR<br>(d) | %<br>(2) |
| Activity 1           |           |            |                        |                               |                       |                                 |          |                       |                                  |                         |            |          |
| contract 1.1         | X         |            | 2,000,000              | 2,000,000                     | 100                   |                                 |          |                       |                                  |                         |            | –        |
| contract 1.2         |           | X          | 2,800,000              | 2,800,000                     | 100                   |                                 |          |                       |                                  |                         |            | –        |
| contract 1.3         |           | X          | 1,200,000              | 1,200,000                     | 100                   |                                 |          |                       |                                  |                         |            |          |
| TOTAL IB             |           |            | 2,000,000              | 2,000,000                     | 100                   |                                 |          |                       |                                  |                         |            |          |
| TOTAL INV            |           |            | 4,000,000              | 4,000,000                     | 100                   |                                 |          |                       |                                  |                         |            |          |
| <b>TOTAL PROJECT</b> |           |            | <b>6,000,000</b>       | <b>6,000,000</b>              | <b>100</b>            |                                 |          |                       |                                  |                         |            |          |

NOTE: DO NOT MIX IB AND INV IN THE SAME ACTIVITY ROW. USE SEPARATE ROW

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 Tendering | Signature of contract | Project Completion |
|--------------|--------------------|-----------------------|--------------------|
| Contract 1.1 | T+1Q               | T+4Q                  | T+16Q              |
| Contract 1.2 | T+4Q               | T+6Q                  | T+10Q              |
| Contract 1.3 | T+4Q               | T+6Q                  | T+10Q              |

## 6. CROSS CUTTING ISSUES

### Equal Opportunity

A gender-balanced approach will be followed in the implementation of the healthcare waste management. The project will provide equal opportunity for men and women to participate in the project

### Environment

In the Republic of Serbia healthcare waste management, falls within the remit of three ministries, Health, Environment and Agriculture. The multidisciplinary activities of these three ministries will trigger a lot of supportive and complementary interventions for the improvement of healthcare waste management. In some Serbian districts local authorities might invest in healthcare waste management by improvement of local water supply systems and sewage disposal for marginalized living without appropriate water and sanitation means, veterinary institutions might provide assistance to some other target groups. Alongside direct interventions, advocacy and the creation of national alliances will also be an important part.

The project will identify cross-cutting issues and tailor the project Steering Committee and Working Groups with representatives of each of the relevant Ministries and their associated institutions.

Main activities concerning cross-cutting issues will be:

- Strengthening of inter-ministerial cooperation in healthcare waste management,
- Strengthening of the cooperation with the Veterinary Directorate in healthcare waste management in order to improve environmental health status
- Efforts to connect all projects dealing with healthcare waste issues in the environmental and veterinary sectors.

### Minorities

The project will not discriminate against minorities or vulnerable groups. The Roma population will be particular beneficiaries since they are mostly included in the recycling business.

## ANNEX I: LOGICAL FRAMEWORK MATRIX IN STANDARD FORMAT

| LOGFRAME PLANNING MATRIX FOR Project Fiche                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                | Treatment of Healthcare Waste                                                                                                                                                                                                      |                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | Contracting period expires 3 years after the signature of the Financing Agreement                                                                                                                                                  | Disbursement period expires 6 years after the signature of the Financing Agreement                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | <b>Total budget:</b> 6,000,000 Euro                                                                                                                                                                                                | <b>IPA budget:</b> 6,000,000 Euro                                                                                                                                                                               |
| Overall objective                                                                                                                                                                                                                                                                                                                                                                                                                   | Objectively verifiable indicators                                                                                                                                                                                                                                                                                                                                                              | Sources of Verification                                                                                                                                                                                                            |                                                                                                                                                                                                                 |
| To contribute to the implementation of environmental and healthcare strategies that will ensure compatibility with EC legislation and best practices in sanitary standards.                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Quality of effective implementation of sanitary standards in the field of hazardous healthcare waste management</li> </ul>                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>MoH internal reports</li> <li>Healthcare facility reports</li> <li>Ministry of Environmental Protection reports</li> <li>Veterinary Directorate reports</li> </ul>                          |                                                                                                                                                                                                                 |
| Project purpose                                                                                                                                                                                                                                                                                                                                                                                                                     | Objectively verifiable indicators                                                                                                                                                                                                                                                                                                                                                              | Sources of Verification                                                                                                                                                                                                            | Assumptions                                                                                                                                                                                                     |
| To improve infectious healthcare waste management in 35 healthcare facilities in Serbia (23 Institutes of Public Health and 12 Veterinary Institutes located in 25 administrative districts in Serbia, Veterinary faculty (1) and social institutions (9)) by completing the system for the collection, storage, treatment and disposal of infectious healthcare waste started under the CARDS Healthcare waste management project. | <ul style="list-style-type: none"> <li>Quality of healthcare infectious waste disposed of by healthcare facilities</li> <li>Quality of healthcare institution management, especially relating to healthcare waste</li> <li>Improvements to working practices in the handling of waste</li> <li>Decrease in the level of needle sticks and infections among healthcare waste workers</li> </ul> | <ul style="list-style-type: none"> <li>MoH internal reports</li> <li>Healthcare facility reports</li> <li>Project reports</li> <li>Ministry of Environmental Protection reports</li> <li>Veterinary Directorate reports</li> </ul> | <ul style="list-style-type: none"> <li>Adoption and implementation of the legislation governing healthcare waste management</li> <li>Harmonisation of legislation and practices with those of the EU</li> </ul> |

| Results                                                                                                                                                                                                                                            | Objectively verifiable indicators                                                                                                                                                                                                                                                                                                                                                                                                                               | Sources of Verification                                                                                                                                                                                                                                                                                                                            | Assumptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Result 1</b><br>Uniform procedures for safe infectious healthcare waste management in 25 districts in place.                                                                                                                                    | <ul style="list-style-type: none"> <li>Number of facility and district waste management plans and procedures drafted and adopted.</li> <li>No. of districts and institutions with uniform posts and job descriptions for healthcare waste staff in place</li> <li>No of healthcare waste staff in place</li> </ul>                                                                                                                                              | <ul style="list-style-type: none"> <li>Report of the Ministries of Health, Agriculture and Environmental Protection on regular handling of infectious healthcare waste in 25 health districts</li> <li>Reports of HCFs submitted to the respective ministries</li> <li>Reports of the regulators submitted to the respective ministries</li> </ul> | <ul style="list-style-type: none"> <li>Implementation and observance of the National Good Practice Guideline for Safe Healthcare Waste Management</li> <li>Legislation governing healthcare waste management (primary and secondary legislation) adopted and observed</li> <li>Sanitary inspectors carrying out regular controls and audits</li> <li>Willingness of HCFs to change management policy</li> <li>Support from all respective ministries in implementing the new HCWM system</li> </ul> |
| <b>Result 2</b><br>More than 60% of total IPH and Veterinary Institute staff in all 25 health districts educated and trained to perform healthcare waste management activities in accordance with the EU legislation and best practice guidelines. | <ul style="list-style-type: none"> <li>Number of educated and trained staff performing healthcare waste management activities in accordance with the EU legislation and best practice guideline in 35 HCFs</li> <li>Quality of segregation practice in HCFs at the point of source</li> <li>Quality of working practice when handling waste</li> <li>Frequency of needle sticks</li> <li>Ability of employees to maintain and operate HCWM equipment</li> </ul> | <ul style="list-style-type: none"> <li>List of trainees trained by the IPA project</li> <li>List of trained trainers by the IPA project</li> <li>Training curriculum and programme for the IPA project</li> <li>Certified staff</li> <li>Training reports</li> <li>Evaluation sheets signed by trainers and trainees</li> </ul>                    | <ul style="list-style-type: none"> <li>HCFs willing to participate and designate staff for training</li> <li>Designated staff willing and able to learn</li> </ul>                                                                                                                                                                                                                                                                                                                                  |
| <b>Result 3</b><br>Improved technical capacities of HCFs for the treatment of infectious healthcare waste in 23 IPHs and 12 veterinary institutes.                                                                                                 | <ul style="list-style-type: none"> <li>Number of vehicles procured and put into service</li> <li>Number of autoclaves procured and put into service</li> <li>Number of shredders procured and put into service</li> </ul>                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Official acceptance statement of equipment delivery, installation, testing and operation thereof</li> <li>Project documentation relating to tendering procedure</li> </ul>                                                                                                                                  | <ul style="list-style-type: none"> <li>Willingness of HCFs to receive and use the said equipment</li> <li>HCFs willing to purchase the consumables to support the operation of the equipment</li> </ul>                                                                                                                                                                                                                                                                                             |

| Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Means                                                                                                                                                                                                                                                                                                                                                                                                                           | Costs                                                                                                                                     | Assumptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activities related to result 1:</b><br>1.13 Assist HCFs and districts in developing waste management plans<br>1.14 Produce job descriptions for waste handlers (waste technician, waste officer, waste manager) and assist with hiring the said staff in 35 HCFs<br>1.15 Assist in defining financial and legislative arrangements for the functioning of the system and implementation in 35 HCFs<br>1.16 Support an information and awareness programme for the professional community on health, safety, and environmental issues relating to healthcare waste.<br>1.17 Develop the tender dossiers<br>1.18 Conduct the tender processes | <ul style="list-style-type: none"> <li>• Team leader 660 days</li> <li>• One national coordinator/senior long term expert for 660 days</li> <li>• Senior consultancy of STE for 44 STE Days</li> <li>• Logistics junior long term expert for 600 days</li> <li>• Junior long term expert for financing 500 days</li> <li>• Pool of junior short tem experts 400 days</li> <li>• Operational &amp; project unit costs</li> </ul> | Service contract: 2,000,000 euro<br>Supply contract :2,800,000 euro<br>Supply contract: 1,200,000 euro<br><br>GRAND TOTAL: 6,000,000 EURO | <ul style="list-style-type: none"> <li>• Willingness of the ministerial level managers to introduce the new waste management system in 35 institutions</li> <li>• Good Practice Guideline recommendations have been made mandatory</li> <li>• Willingness of HCFs managers to implement the new healthcare waste management system</li> <li>• Financial directors in HCFs to develop a system of reallocation of financial sources for the new healthcare waste management system</li> </ul> |

|                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activities related to result 2:</b><br>1.19 Develop the training curriculum and training plan<br>1.20 Select trainees<br>1.21 Organise training sessions<br>1.22 Evaluate of trainings<br>1.23 Coach trainees on the job after training. | <ul style="list-style-type: none"> <li>• 4 Short term senior experts for 446 Days</li> <li>• 2 long term junior experts for 737 days</li> <li>• training equipment and stationary</li> <li>• renting training venues</li> <li>• meals and accommodation</li> <li>• travel costs for project staff</li> </ul> |  | <ul style="list-style-type: none"> <li>• Trainees will be absent from work with the prior approval from their directors</li> <li>• Willingness of the managers to select the appropriate trainees</li> <li>• Ministries to cover travel and accommodation costs</li> </ul> |
| <b>Activities related to result 3:</b><br>1.24 Develop the tender dossiers<br>1.25 Conduct the tender processes<br>1.26 Distribute the equipment and ensure installation (autoclaves, shredders, and vehicles)                              | <ul style="list-style-type: none"> <li>• senior experts</li> <li>• junior experts</li> <li>• equipment</li> </ul>                                                                                                                                                                                            |  | <ul style="list-style-type: none"> <li>• HFCs must be ready to receive the equipment (infrastructure requirements)</li> <li>• HCFs to be in charge of maintaining the equipment</li> <li>• ADR requirements adopted and in place</li> </ul>                                |
|                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                            |

**ANNEX II: AMOUNTS (IN €) CONTRACTED AND DISBURSED BY QUARTER FOR THE PROJECT  
(IPA CONTRIBUTION ONLY)**

| <b>Contracted</b> | <b>QR1</b> | <b>QR2</b> | <b>QR3</b> | <b>QR4</b>       | <b>QR5</b> | <b>QR6</b>       | <b>QR7</b> | <b>QR8</b>       | <b>QR9</b> | <b>QR10</b>      | <b>QR11</b> | <b>QR12</b>      | <b>QR13</b> | <b>QR14</b>      | <b>QR15</b> | <b>QR16</b> | <b>TOTAL</b>     |
|-------------------|------------|------------|------------|------------------|------------|------------------|------------|------------------|------------|------------------|-------------|------------------|-------------|------------------|-------------|-------------|------------------|
| Contract 1.1      |            |            |            | 2,000,000        |            |                  |            |                  |            |                  |             |                  |             |                  |             |             | 2,000,000        |
| Contract 1.2      |            |            |            |                  |            | 2,800,000        |            |                  |            |                  |             |                  |             |                  |             |             | 2,800,000        |
| Contract 1.3      |            |            |            |                  |            | 1,200,000        |            |                  |            |                  |             |                  |             |                  |             |             | 1,200,000        |
| <b>Cumulated</b>  |            |            |            | <b>2,000,000</b> |            | <b>6,000,000</b> |            |                  |            |                  |             |                  |             |                  |             |             | <b>6,000,000</b> |
| <b>Disbursed</b>  |            |            |            |                  |            |                  |            |                  |            |                  |             |                  |             |                  |             |             |                  |
| Contract 1.1      |            |            |            | 200,000          |            | 300,000          |            | 300,000          |            | 300,000          |             | 300,000          |             | 300,000          |             | 300,000     | 2,000,000        |
| Contract 1.2      |            |            |            |                  |            | 1,260,000        |            | 1,260,000        |            | 280,000          |             |                  |             |                  |             |             | 2,800,000        |
| Contract 1.3      |            |            |            |                  |            | 540,000          |            | 540,000          |            | 120,000          |             |                  |             |                  |             |             | 1,200,000        |
| <b>Cumulated</b>  |            |            |            | <b>200,000</b>   |            | <b>2,300,000</b> |            | <b>4,400,000</b> |            | <b>5,100,000</b> |             | <b>5,400,000</b> |             | <b>5,700,000</b> |             |             | <b>6,000,000</b> |

### **ANNEX III: DESCRIPTION OF INSTITUTIONAL FRAMEWORK**

The Ministry of Health of the Republic of Serbia is in charge of the implementation and monitoring of this project. The work, mandate and authorisations of the Ministry are regulated by the Law on Ministries (adopted on 15 May, 2007 (Official Gazette of the Republic of Serbia, No. 48/07) – i.e. Article 21.

The Ministry consists of the following sectors:

1. Sector for the Organisation of Health Services and Health Inspection
2. Sanitary Surveillance Sector
3. Sector for Healthcare and Public Health Programming
4. Sector for Medicines and medical devices
5. Sector for Health Insurance and Financing
6. Sector for European Integrations and International Relations

## **ANNEX IV: REFERENCE TO LAWS, REGULATIONS AND STRATEGIC DOCUMENTS:**

### **Reference list of relevant laws and regulations**

- Law on Environmental Protection (Official Gazette of Republic of Serbia No. 135/04)
- Law on Waste Handling (Official Gazette of Republic of Serbia No. 25/96)
- Regulation on the Harmless Manner of removal of Carcasses and Other Waste of Animal Origin and of Conditions that have to be met Concerning Facilities and Equipment for Sorting, Harmless removal and Establishing Causes of Animal Perishing and on Transportation Vehicles that carry Carcasses and Waste of Animal origin (Official Gazette of Republic of Serbia No 53/89)
- Regulation of the Treatment of Parts of Human body which have been Surgically or Otherwise Removed (Official Gazette of Republic of Serbia No 28/80)
- Law on the Protection of the Population from Contagious Diseases that pose a Threat to the Whole Country, (Official Gazette of FR Yugoslavia No 51/84)
- Regulation on the Measures Aimed at Protection of Spread of Contagion within Healthcare Facilities (Official Gazette of Republic of Serbia No 49/86)
- The National Waste Management Strategy, Government of Serbia, 2003
- Health Care Law.

## ANNEX V: DETAILS OF CONTRACTS

| <b>Activity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Budget (€)</b>                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Work Package I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Service contract: 2,000,000</b><br><b>Supply contract: 2,800,000</b><br><b>Supply contract: 1,200,000</b> |
| <ul style="list-style-type: none"> <li>• Introduction of safe healthcare waste management in 25 districts/35 HCFs by 2013</li> <li>• Forming the project team Programme management Training needs assessment Raising awareness programme implementation <ul style="list-style-type: none"> <li>• Tender dossier development</li> <li>• Supply of the equipment for treatment and transport of infectious waste to the HCFs (autoclaves, shredders and vehicles)</li> </ul> </li> <li>• Launching of a tender for 35 systems for the sterilisation of infectious waste (autoclaves and shredders) and 35 infectious waste transport vehicles</li> </ul> |                                                                                                              |
| Work Package II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                              |
| <ul style="list-style-type: none"> <li>• Capacity building for 35 HCFs staff in the domain of infectious waste management</li> <li>• Forming and training of local teams of trainers</li> <li>• Selection of trainers and trainees</li> <li>• Training implementation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                              |
| Work Package III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                              |
| <ul style="list-style-type: none"> <li>• Distribution of the necessary equipment and installation thereof</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                              |
| <b>Grand total:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>EUR 6,000,000</b>                                                                                         |