

Standard Summary Project Fiche**1. Identification**

Project Title	Upgrading of the emergency preparedness system in the Republic of Croatia
Cris Decision number	2011/023-389
Project no.	4
MIPD Sector Code	5. Energy (Multi-Beneficiary MIPD – 5.Transport and Energy Infrastructure, including nuclear safety)
ELARG Statistical code	03.64 - Nuclear Safety
DAC Sector code	23064
Total cost (VAT excluded)¹	EUR 500 000
EU contribution	EUR 434 500
EU Delegation in charge/Responsible Unit	Unit D3 - Regional Programmes DG Enlargement
Management mode	Decentralised Central Finance and Contracting Agency Ms Marija Tufekčić Programme Authorising Officer Ulica grada Vukovara 284 10000 Zagreb, Croatia
Implementing modality	Project
Project implementation type	Bilateral
Zone Benefiting from the action/Beneficiaries	Croatia
Final date for contracting	3 years following the date of conclusion of the financing agreement
Final date for execution of contracts	2 years following the end date for contracting
Final date for disbursement	1 year following the end date for execution of contracts

¹ The total project cost should be net of VAT and/or of other taxes. Should this not be the case, clearly indicate the amount of VAT and the reasons why it is considered eligible.

2. Overall Objective and Project Purpose

2.1 Overall objective

To set out arrangements for the protection, support and welfare of the public and for safeguarding of the environment, the infrastructure, property or the economy in times of emergency through the establishment of a national system for preparedness and response to nuclear and radiological emergencies.

2.2 Project purpose

To harmonize the radiological emergency response procedure with neighbouring countries, in particular with Slovenia and Hungary; to upgrade national radiological emergency response capabilities to face incidents and accidents of different levels; and to upgrade the national emergency plan that will enable rapid implementation of protective measures within the first few hours and in the days after the accident through a coordinated response of the emergency services and other agencies.

2.3. Link with AP/NPAA/EP/SAA

European Commission Avis (April 2004)

Chapter 14 (Energy)

“EU energy policy objectives include the improvement of competitiveness, security of energy supplies and the protection of the environment.

In the area of nuclear safeguards, Croatia has signed and ratified a Comprehensive Safeguard Agreement and an Additional Protocol to this Agreement with the International Atomic Energy Agency (IAEA). Upon accession, the Euratom Treaty would be directly applicable and Croatia’s nuclear operators would have to report all safeguards related information to the Commission, which would in turn report to the IAEA.

Conclusion

Croatia will have to make further efforts to align its legislation with the *acquis* in this area and to effectively implement and enforce it, including Euratom provisions, in the medium term.”

Chapter 22 (Environment)

“Regarding nuclear safety and radiation protection, Croatia has established a legal framework for different aspects concerning the basic safety standards, medical exposure and emergency preparedness. ... Due to the lack of administrative capacity, the direct implementation of Articles 33 to 37 of the Euratom Treaty and of the arrangements for emergency preparedness would pose significant problems. Croatia therefore needs to establish appropriate regulatory bodies, competent radiation protection authorities and special advisory committees.”

2.4. Link with MIPD

The IPA Multi-Beneficiary Multi-annual Indicative Planning Document (MIPD) for the years 2011-2013² establishes that: “In the area of nuclear safety and radiation protection, full transposition of the EU *acquis* remains an objective for most of the IPA Beneficiaries. This transposition would require the full operation of the national regulatory bodies which, for some of them, has not yet been accomplished.

² C(2011)4179, 20.06.2011.

In addition, there are a number of issues that need to be addressed in all Beneficiaries such as the establishment of an appropriate regulatory framework, the reduction of medical or occupational exposure, and the radioactive contamination of the environment (including by depleted uranium).

Much remains to be done also for emergency preparedness and early warning systems, training of personnel confronted with ionising radiation and public information. The prevention of illicit trafficking of nuclear materials and radiation sources, as well as the management of radioactive waste (including radioactive lightning rods) and the storage in licensed facilities remains a major concern.

All these issues may require funding for supplying equipment, providing technical assistance and possibly carrying out works.”

In addition, in the Multi-Beneficiary Multi-annual Indicative Planning Document (MIPD) 2009-2011³, section 2.3.3.11 – Nuclear Safety and Radiation Protection, the following objectives and expected results are listed:

“Objectives

Enhance the technical competence and administrative capacity of the national radiation safety authorities and other relevant public organisations; Contribute to solving the most urgent radiological issues that confront the IPA beneficiaries.

Expected results

Improved efficiency and effectiveness of relevant public administrations (radiation protection authorities, nuclear safety authorities and other publicly funded bodies); Greater competence and awareness among Beneficiary officials on how to implement EU *acquis*; Greater availability of instruments to combat illicit trafficking of nuclear materials and radiation sources; More early warning and efficient emergency systems in place; Reduction of the radiation risks for the members of the public; Further alignment of the management practices of radioactive materials with EU best practices in particular in the field of radioactive waste management and decommissioning; Better monitoring and cleaning up of contaminated territories with depleted uranium.“

2.5. Link with National Development Plan

Not applicable

2.6. Link with national sectoral investment plan

Not applicable

3. Description of project

3.1. Background and justification:

As the Chernobyl explosion in 1986 demonstrated, radioactive contamination does not respect national borders. No country can guarantee itself from radioactivity released into the atmosphere elsewhere in the world. Although Croatia has no nuclear installations on its own territory, there are two nuclear power plants (NPP) in adjacent EU countries, the vicinity of which obliges Croatia to strengthen its radiological emergency response capabilities. NPP Krsko in Slovenia is located close to the

³ C(2009)4518, 16.06.2009.

Croatian - Slovenian border, less than 30 kilometres from the Croatian capital of Zagreb, while NPP Paks is located in the southern part of Hungary and potential release from it would affect the north-east part of Croatia. If an accident did occur in the future in those NPPs, particularly in the NPP Krsko, it would have serious consequences for Croatia, its population and the environment.

On the other hand, radiation emergencies can occur on the Croatian territory, although with no such widespread consequences. Radiological incidents that could trigger an emergency can be broken down into three categories:

- An accident involving a licensed radiation source such as fires, spills, transport accidents and the loss or theft of a radioactive source.
- A deliberate criminal act or terrorist attack such as the detonation of a dirty bomb (Radiological Dispersal Device) or an arson attack on a building where a source of radioactivity is located.
- A major incident with widespread radiological consequences including an accident at a nuclear installation abroad, the re-entry into the Earth's atmosphere of a nuclear-powered satellite or an accident involving a nuclear-powered ship or submarine.

Depending on the scale and nature of the event, the response may be dealt with by the licensee or require the involvement of the emergency services, but the basic guidance should be part of the national radiological emergency plan.

International co-operation, especially among neighbouring countries, is crucial in the case of an event of such great rate as a nuclear accident, therefore harmonisation of response procedures with the adjacent countries with nuclear power plants on their territories would be of mutual interest.

The National Plan and Programme of Ionising Radiation Protection Measures and Interventions in the case of Radiological Emergency that was promulgated by the Government in 2008 (OG 49/08) is still in force but according to the Article 65 of the new Act on Radiological and Nuclear Safety (OG 28/10), the Government of the Republic of Croatia shall adopt the Regulation on measures for protection against ionising radiation and interventions in case of emergency. This Regulation should be proposed by the director of the State Office for Radiological and Nuclear Safety with prior approval of the body competent for protection and rescue, the ministry competent for health and the ministry competent for internal affairs. According to the Article 100 of the mentioned Act, under heading XVII Transitional and final provisions, the Government of the Republic of Croatia shall adopt the Regulation within 18 months from the day the Act entered into force, respectively till November 1, 2011.

The new Regulation will replace and upgrade the existing National plan. However, taking into account the content of the existing National plan and the planned content of the new Regulation, provisions of the new Regulation will have to be further developed particularly in the area of urgent health-protective population-oriented measures such as stable iodine tablet administration i.e. iodine prophylaxis. Additionally, implementation of the relevant *acquis* (Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of radiological emergency) needs to be assessed and improved where needed. Long term measures in the sense of management options for inhabited areas and for food production systems also have to be setup.

On the basis of the existing National Plan and Programme of Ionising Radiation Protection Measures and Interventions in the case of radiological emergency the lead institution for radiological emergency response is the State Office for Radiation Protection (respectively currently the State Office for Radiological and Nuclear Safety) and in the case of nuclear emergency the lead institution is the National Protection and Rescue Directorate.

Regardless of the lead institution, in the case of radiological or nuclear accident/incident certain services always must respond in the very outbreak of the event. Corresponding to the nature of the event and its consequences, those would be fire-fighters, medical emergency aid, health care institutions, police forces including criminal investigation/forensic teams; CBRN (Chemical Biological Radiological and Nuclear) hazards Civil Protection State Intervention Units, radiological assessors of SORNS, mobile assessment units of authorised technical services and/or others (later referred to as stakeholders). These first responders should be protected with adequate suits including accessories and dosimeters. They should be able to perform decontamination of persons and/or objects and equipment as well as to check if decontamination is done properly. For both tasks respective equipment is necessary. Mentioned services in Croatia have on their disposal limited quantities of self protecting equipment, measurement instruments and decontamination equipment. Particularly deficient in regard to adequate self protecting equipment are fire-fighters, medical emergency aid and police forces.

In the case of emergency when fast information should be available, very useful and needed are vehicle based mobile in-situ systems. This type of equipment can be used in emergency situations but it is more likely that it will be used on a daily basis in routine operations to perform in-situ gamma spectrometric measurements for determination of the background activity concentration at specific locations.

Due account will have to be taken from the on-going IPA funded project entitled "Enhancement of the technical capacity of nuclear regulatory bodies in Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Serbia as well as Kosovo⁴" that is implemented in joint management with the IAEA (task 4).

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

Assessment of project impact and catalytic effect – The project will enable the beneficiary country to have a better understanding of radiological emergencies that can occur within its territory or can impact the beneficiary country in case of nuclear accidents in neighbouring countries or elsewhere in Europe. The result of the project will be a prompt and adequate response to any radiological emergency.

Cross border impact – Envisaged project will ensure adequate response to radiological emergencies in Croatia, which will contribute to the radiological safety of the whole South-East Europe region.

⁴ under UNSCR 1244/1999.

Sustainability – Efficient nuclear and radiological emergency response system is a long-lasting process involving several different governmental institutions and other stakeholders. The Regulation on measures for protection against ionising radiation and interventions in case of emergency upgraded through the project could be subject to further improvements after prescribed procedures would be tested in the exercise or in real situations. Equipment procured throughout the project will be distributed to the first nuclear/radiological emergency responders. Equipment that might be identified as necessary out of the scope from this project can be purchased over years from the state budget of the beneficiary country. The transfer of knowledge acquainted in this project will be ensured through train-the-trainers system. The project will contribute to the efficient protection of the population and the environment in potential events of nuclear and radiological emergencies.

3.3. Results and measurable indicators

Result 1 - Current emergency preparedness systems in the Republic of Croatia assessed and main risks that can trigger radiological emergencies in the country identified

Measurable indicators for result 1:

- Report on the current Croatian emergency preparedness systems
- List of main potential radiological threats

Result 2 - Recommendations for upgrade of the regulatory framework related to emergency preparedness formulated

Measurable indicator for result 2:

- Report on regulatory framework related to emergency preparedness assessment and recommendations

Result 3 – Upgrade of the national emergency preparedness plan as part of the Regulation on measures for protection against ionising radiation and interventions in case of emergency (to be passed by 1 November 2011) including urgent health-protective measures and management options for the later phases drafted. Response procedures with neighbouring countries harmonised.

Measurable indicator for result 3:

- Draft upgrade of the national emergency plan prepared

Result 4 - Response capabilities assessed and upgraded. Minimum response equipment identified.

Measurable indicator for result 4:

- Education plans and training materials for all stakeholders developed
- Number of first responders trained
- List of minimum response equipment elaborated
- Tender documentation developed

Result 5 – Equipment identified as minimum response capabilities procured

Measurable indicator for result 5:

- Equipment procured

Result 6 – Radiological incident exercise prepared and executed.

Measurable indicator for result 6:

- Scenario and planning documents for the exercise developed
- Exercise executed and analysed

Result 7 – National large scale nuclear accident exercise prepared

Measurable indicator for result 7:

- Scenario of the exercise elaborated
- Exercise planning documents developed

3.4. Activities:

Activity 1 - Assessment of the current Croatian emergency preparedness systems and identification of main risks that can trigger radiological emergencies in the country: contract 1 – Technical Assistance.

Activity 1.1 - Assessment of the current Croatian emergency preparedness system including regulatory framework, distribution of responsibilities for the response among different governmental and non-governmental organisations, available human resources and existing equipment.

Activity 1.2. - Radiological/nuclear incident/accident risk assessment (meaning to estimate, based on the number and activities of the radioactive sources used in the country, facility threat category, to estimate the impact of the possible release from NPPs Krsko and Paks ...).

Activity 2 – Development of a report on regulatory framework related to emergency preparedness: contract 1 – Technical Assistance.

Activity 2.1 - Clear division of responsibilities of all institutions and intervening organisations that have a role in the nuclear and radiological emergency response. Establishment of cooperation and co-ordination of all relevant stakeholders at the national level.

Activity 2.2 – Establishment of a list of regulatory improvements that would be necessary.

Activity 3 – Propose upgrade of the national emergency response plan (as part of the Regulation on measures for protection against ionising radiation and interventions in case of emergency to be passed by 1 November 2011), including urgent health-protective measures and harmonisation of response procedures with the neighbouring countries with nuclear power plants on their territories: **contract 1 – Technical Assistance.**

Activity 3.1 - Elaboration of urgent health-protective measures and management options for the later phases.

Activity 3.2 - Harmonisation of response procedures with the neighbouring countries with nuclear power plants on their territories (Slovenia, Hungary) .

Activity 3.3 – Drafting the proposal for upgrade of the national emergency response plan.

Activity 4 – Capacity building of institutions involved in emergency response procedures: contract 1 – Technical Assistance

Activity 4.1 - Development of an education plan and training materials for all relevant stakeholders on their role in different types of interventions. Relevant stakeholders are the

first responders, i.e. fire-fighters, first medical aid personnel, radiological assessors; health care institutions, pharmacies in regard to iodine tablets distribution, the National Protection and Rescue Directorate with regards to urgent measures implementation, authorised technical services and the personnel of the Ministry of Agriculture, Fisheries and Rural Development and Ministry of Health and Social Welfare in charge for long terms measures. The training materials should be developed in English and Croatian languages.

Activity 4.2 - Specific training for each category of first responders depending on their role (e.g. fire-fighters, first medical aid personnel, radiological assessors...) including self protection measures.

Activity 4.3 – Identification of minimum response equipment.

Activity 4.4 – Development of tender documentation for the identified minimum response equipment.

Activity 5 - Purchase of equipment identified as minimum response capabilities: contract 2 – Supply.

Activity 5.1 - Purchase of the equipment identified as minimum response capabilities. The exhaustive list of the required equipment will be developed through the Technical Assistance contract, activity 4 of this project and it might comprise, depending on the existing capabilities, protective equipment (e.g. protective suits), radioactivity detection equipment for the first responders, decontamination sets, etc. Following the territorial organization of the National Protection and Rescue Directorate, equipment would be provided to the Protection and Rescue Departments in the four biggest cities: Zagreb, Rijeka, Osijek and Split from where it would be distributed to any location of emergency in a very short time. Prioritised equipment will be procured out of this project within the financial resources available for the supply contract .

Activity 6 – Preparation and execution of radiological incident exercise: contract 1 – Technical Assistance.

Activity 6.1 - Development of the exercise scenario and planning documents in English and Croatian languages.

Activity 6.2- Exercise preparation.

Activity 6.3 -Exercise execution and analysis.

Activity 6.4 -Elaboration of the plan upon acquired experience (lessons learned).

Activity 7 – Planning of the national large scale nuclear accident exercise: contract 1 – Technical Assistance.

Activity 7.1 – Elaboration of the scenario of the national large scale nuclear accident exercise.

Activity 7.2 – Development of the scenario and planning documents for the exercise in English and Croatian languages.

3.5. Conditionality and sequencing

Sequencing - Project activity in relation to procurement of equipment (Activity 5.1) is to begin after the service contract, since the needed equipment will be identified through the service contract. Supply contract is not a prerequisite for Activity 6 since the equipment which the beneficiary country already possesses might be sufficient for the purpose of the planned exercise proceedings.

3.6. Linked activities

Prior Regional or Multi-beneficiary Programmes (e.g. IPA, CARDS, PHARE)

In 2008, the project "Installation of RODOS system in the Republic of Croatia" (017-519.02.02) in the framework of the Phare Programme for Community support in the field of nuclear safety for Croatia 2005, was implemented. Contract for the purchase of equipment was signed in 2007. The State Office for Nuclear Safety (SONS) implemented this project in the period 2007-2008 with the goal to strengthen expert and technical basis for planning and preparedness in the case of a nuclear accident in the Republic of Croatia. During 2009 RODOS system has been in trial operation.

In 2009, the project "Support to the SONS in upgrading and modernisation of the Croatian Early Warning System" (2006/018-411.02.01) in the framework of Phare 2006 Programme for Community support in the field of nuclear safety for Croatia, has been in implementation. The contract for the purchase of the equipment and the service contract were signed in 2008. With the coordination of this project in the period 2008-2009, SONS has contributed to the efficiency of the Croatian early warning system for the case of a nuclear accident.

Through the above mentioned project technical capacities for early warning of the increased level of radioactivity and for predicting the area that would be contaminated in the case of potential release from a NPP have been upgraded as part of the comprehensive radiological emergency preparedness system.

Phare 2005 project "Border Control of Nuclear and Other Radioactive Materials with Mobile Portal Monitor" started on 30 November 2007 and finished on 20 June 2009. Main result of the project was increased capacity for efficient Croatian border control of the trafficking of nuclear and other radioactive materials. Through the supply component of the project twelve pagers and two hand-held monitors were procured. Well-equipped and trained nuclear and other radioactive materials detection and response team was established and is enabled for randomized border control with the ability to implement procedures that have been developed in the context of the National plan and program of the ionizing radiation protection measures in the case of an emergency situation.

Phare 2006 project "Border Control of Nuclear and Other Radioactive Materials with Stationary Portal Monitor Practices in Croatia" started on 13 November 2008 and its implementation was concluded according to the Financial Agreement on 30 November 2010. Main result of the project was enhancement of capacity for efficient detection of illicit trafficking of nuclear and other radioactive materials at the Croatian border and strengthened capabilities of Croatian authorities in the field of control of illicit trafficking of nuclear and radioactive materials. Equipment for detection and identification of nuclear and radioactive materials was procured through the supply component of the project which enabled custom officers to perform a more efficient control of the Croatian border, while the software was developed through the service component in order to provide a highly reliable communication between SORNS and remote terminal units necessary for real-time acquisition of all recorded data and timely response to any case of nuclear and other radioactive materials detection at the Croatian borders.

IPA 2007 regional project "Assessment of the regulatory infrastructure in the field of nuclear safety and radiation protection in Albania, Bosnia and Herzegovina, Croatia, the

former Yugoslav Republic of Macedonia, Montenegro, Serbia, as well as Kosovo" started on 12 December 2008 and finished on 12 December 2009. The outcomes of the project were: description and analysis of the contemporary legislative background that is underpinning the establishment of regulatory bodies in each of the six Beneficiaries; description and analysis of the contemporary mandate, organization, structure, quality management system, staffing, technical capacity, inspection procedures, and funding mechanism of the regulatory bodies in place in each of the Beneficiaries; analysis of the adequation of the contemporary structure, organization and technical capacity of the regulatory bodies against the radiological issues posed in the country and the transposition of the EURATOM Directives and identification of the areas where enhancement of the capacity of the regulatory bodies would be desirable. Report on the Task 6 - Action Plans for Improvement of Regulatory Infrastructure on Nuclear/Radiation Issues (ENCO FR-(09)-55, December 2009), dealing with gaps in the Republic of Croatia ask for action for improvements of National emergency plan for nuclear accidents (item CRO4.6) as well as for planning and conducting Emergency exercise for large scale event (item CRO4.7).

National IPA Programmes

Not applicable.

Other Donor Assistance (e.g. EU Member States)

IAEA RER2006011 Regional project: Establishment of National Capabilities for Response to a Radiological and Nuclear Emergency (TSA - 5).

The overall objective of this IAEA project is strengthened and established coordinated national systems for preparedness and response to nuclear and radiological emergencies using an integrated all-hazards approach in compliance with the international requirements "Preparedness and Response to Nuclear and Radiological Emergencies", IAEA safety standard Series GS-R2. IAEA will, based on the endorsed country specific plans, provide assistance to strengthen a national system and plan for preparedness and response to both, radiological and nuclear emergencies in order to harmonize response procedures in the region.

The project has been designed for the region of Europe and 24 countries are participating. It has been in implementation for three years and will end in 2011. Main activities are exchange of experiences through coordination meetings and organisation of training courses for first responders and biodosimetry laboratories personnel. Three training courses for the first responders, cca 30 participants each, were held so far, in Greece, Lithuania and in Slovenia. The first meeting on biodosimetry issue will be organized this year.

The problem of implementing this project is that most of the participating countries, particularly the ones in Western Europe, already have elaborated and exercised national plans while Croatia is only commencing with activities in this field. Limited number of the emergency response personnel from Croatia has been trained through IAEA financed project thus the knowledge base has been created and the personnel trained of that project is competent to train other colleagues.

3.7. Lessons learned

The lessons learned from the previous EU projects were mainly related with the need for preciseness in preparation of the necessary documentation, respecting deadlines and necessity of establishment of a close cooperation with relevant institutions.

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4. Indicative Budget (amounts in EUR)

			SOURCES OF FUNDING										
			TOTAL EXP.RE	TOTAL PUBLIC EXP.RE	IPA EU CONTRIBUTION		NATIONAL PUBLIC CONTRIBUTION					PRIVATE CONTRIBUTION	
ACTIVITIES	IB (1)	INV (1)	EUR (a)=(b)+(e)	EUR (b)=(c)+(d)	EUR (c)	% (2)	Total EUR (d)=(x)+(y)+(z)	% (2)	Central EUR (x)	Regional/ Local EUR (y)	IFIs EUR (z)	EUR (e)	% (3)
Activity 1-4 Activity 6-7 Contract 1	x		190 000	190 000	171 000	90	19 000	10	19 000				
Activity 5 Contract 2		x	310 000	310 000	263 500	85	46 500	15	46 500				
TOTAL IB			190 000	190 000	171 000	90	19 000	10	19 000				
TOTAL INV			310 000	310 000	263 500	85	46 500	15	46 500				
TOTAL PROJECT			500 000	500 000	434 500	87	65 500	13	65 500				

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 **Public** Expenditure (column (b))

(3) 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 - TA	Q3 2012	Q2 2013	Q2 2015
Contract 2 - Supply	Q4 2013	Q2 2014	Q2 2015

6. Cross cutting issues

6.1 Equal Opportunity

Based on the fundamental principles of promoting equality and combating discrimination, participation in the project will be guaranteed on the basis of equal access regardless of sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation.

All contractors shall be requested to provide monitoring data recording the participation of men and women in terms of expert inputs (in days) and of trainees benefiting under the project (in days) as an integral component of all project progress reports.

Participation will be open to both: female and male personnel. Records on staff participating in training and other project activities (e.g. project progress reports) will reflect this statement.

6.2 Environment

By accomplishing the project beneficiary country will enhance its capabilities to rapidly response to radiological emergencies and thus minimise influence of such events to the environment. Therefore the project will have positive impact to the environment.

6.3 Minorities

Based on the fundamental principles of promoting equality and combating discrimination, participation in the project will be guaranteed on the basis of equal opportunity for minorities.

ANNEXES

- I- Log frame in Standard Format
- II- Amounts contracted and disbursed per quarter over the full duration of the project
- III Description of Institutional Framework
- IV Related laws, regulations and strategic documents
- V Details per EU funded contract

ANNEX I: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche		Programme name and number IPA	2011 IPA horizontal programme on nuclear safety and radiation protection (2011/023-389)
Upgrading of the emergency preparedness system in the Republic of Croatia		Contracting period expires: 3 years following the date of the conclusion of the financing agreement	Disbursement period expires: 1 year following the end date for execution of contracts
		Total budget : EUR 500 000	IPA budget: EUR 434 500
Overall objective	Objectively verifiable indicators	Sources of Verification	
To set out arrangements for the protection, support and welfare of the public and for safeguarding of the environment, the infrastructure, property or the economy in times of emergency through establishment of the coordinated national system for preparedness and response to nuclear and radiological emergencies.	<ul style="list-style-type: none"> comprehensive radiological emergency response system established 	<ul style="list-style-type: none"> Project final reports 	
Project purposes	Objectively verifiable indicators	Sources of Verification	Assumptions
<ul style="list-style-type: none"> To harmonize radiological emergency response procedure with the neighbouring countries with nuclear power plants on their territories To upgrade national radiological emergency response capabilities to face incidents and accidents of different levels. To develop the national emergency plan that will enable rapid implementation of protective measures within the first few hours and in the days after the accident through coordinated response of the emergency services and other agencies. 	<ul style="list-style-type: none"> Cooperation with Slovenia and Hungary on harmonization of emergency response procedure established Cooperation among all authorities and intervening organisations that have role in the nuclear and radiological emergency response established First responders aware of their responsibilities and tasks and trained to perform them National emergency plan upgraded 	<ul style="list-style-type: none"> Project Progress Reports Training record and evaluation Official Gazettes 	Willingness of the Croatian, Slovenian and Hungarian governments to establish cooperation Support of the Croatian government
Results	Objectively verifiable indicators	Sources of Verification	Assumptions
<ul style="list-style-type: none"> Current emergency preparedness systems in the Republic of Croatia assessed and main risks that can trigger radiological emergencies in the country identified Recommendations for upgrade of the regulatory framework related to emergency preparedness formulated 	<ul style="list-style-type: none"> Report on current emergency preparedness system List of main radiological threats Report on regulatory framework related to emergency preparedness recommendations 	<ul style="list-style-type: none"> Project Inception Report Meeting reports/minutes Official Gazette Number of personnel trained Annual SORNS report 	Active participation of relevant stakeholders in all project activities Willingness of the stakeholders to establish cooperation

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<ul style="list-style-type: none"> ○ Upgrade of the national emergency preparedness plan as part of the Regulation on measures for protection against ionising radiation and interventions in case of emergency (to be passed by 1 November 2011) including urgent health-protective measures and management options for the later phases drafted. Response procedures with neighbouring countries harmonised ○ Response capabilities assessed and upgraded. Minimum response equipment identified ○ Procurement of equipment identified as minimum response capabilities ○ Radiological incident exercise prepared and executed ○ National large scale nuclear emergency exercise prepared. 	<ul style="list-style-type: none"> • Draft upgrade of the national emergency plan prepared • Education plans and training materials developed • Number of first responders trained • List of minimum response equipment elaborated • Tender documentation developed • Equipment procured • Exercise executed and analysed • Scenario for the exercise elaborated • Exercise planning documents developed 	<ul style="list-style-type: none"> • Supply contract • Exercise report 	
<p>Activities</p> <p>Activity 1 – Assessment of current Croatian emergency preparedness system and identification of main risks that can trigger radiological emergencies in the country</p> <p>Activity 2 - Development of a report on regulatory framework related to emergency preparedness</p> <p>Activity 3 - Propose upgrade of the national emergency response plan (as part of the Regulation on measures for protection against ionising radiation and interventions in case of emergency to be passed by 1 November 2011), including urgent health-protective measures and harmonisation of response procedures with the neighbouring countries with nuclear power plants on their territories</p> <p>Activity 4 - Capacity building of institutions involved in emergency response procedures</p> <p>Activity 5 – Purchase of equipment identified as minimum response capabilities</p> <p>Activity 6 – Preparation and execution of radiological incident exercise</p> <p>Activity 7 - -- Planning of the national large scale nuclear accident exercise: contract 1 – Technical Assistance</p>	<p>Means</p> <p>Activity 1 - 4 and 6-7: contract 1 - Technical Assistance</p> <p>Activity 5: contract 2 - Supply contract</p>	<p>Costs</p> <p>EUR 190 000</p> <p>EUR 310 000</p>	<p>Assumptions</p> <p>Enough personnel in all authorities and intervening organisations available</p> <p>Timely and dully delivered equipment</p> <p>Adequate location and equipment for executing radiological emergency exercise ensured</p>

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

Contracted	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015
Contract 1	190 000								
Contract 2					310 000				
Cumulated	190 000	190 000	190 000	190 000	500 000	500 000	500 000	500 000	500 000
Disbursed									
Contract 1	114 000								76 000
Contract 2					186 000				124 000
Cumulated	114 000	114 000	114 000	114 000	300 000	300 000	300 000	300 000	500 000

ANNEX III: Description of Institutional Framework

The main beneficiary organization in Croatia will be the State Office for Radiological and Nuclear Safety.

The legal framework of the SORP is defined on the Act on Radiological and Nuclear Safety ("Official Gazette" No. 28/10). SORNS, as radiation protection and nuclear safety authority performs the following tasks:

1. approve the carrying out of nuclear activities,
2. approve the carrying out of practices involving sources of ionising radiation,
3. approve procurement, import, export, transport and transit of ionising radiation sources,
4. authorise the use of ionising radiation sources,
5. conduct independent safety analyses and issue decisions or certificates regarding the location, design, construction, operation and decommissioning of a facility in which a nuclear activity is to be performed,
6. take part in the procedure for issuing location permits, building permits, permits for removal and in the procedure for issuing use permits for structures that accommodate sources of ionising radiation or in which practices involving sources of ionising radiation are carried out in accordance with *lex specialis*,
7. approve and supervise the professional operations of authorised technical services and authorised experts for nuclear safety,
8. organise and supervise, and where necessary also carry out tests on the presence of the type and intensity of ionising radiation in the environment, food and feed, medicinal products and general use products under regular conditions as well as in cases of suspected emergency,
9. keep records on the licences, approvals, decisions and certificates which it has issued within the scope of its authority, and maintain and supervise records on ionising radiation sources, licensees and licence holders, beneficiaries, exposed workers, level of irradiation of exposed workers as well as the level of irradiation of persons subject to medical exposure and of other persons,
10. carry out inspections to ensure the implementation of the provisions of this Act and regulations adopted on the basis thereof,
11. elaborate technical platforms for teaching curricula and programmes for regular and additional education as well as for renewal of knowledge in the field of protection against ionising radiation,
12. ensure expert assistance in implementing the national plan and programme for procedures in the event of a nuclear accident and emergencies connected with sources of ionising radiation,
13. inform the mass media, competent bodies, organisations, associations and international institutions on emergencies connected with sources of ionising radiation,
14. provide expert assistance and cooperation in activities for preventing illicit trafficking in nuclear and other radioactive material to state administration bodies competent for such activities,
15. monitor safety conditions at nuclear power plants in the region and carries out assessments of the threat of nuclear accidents there, especially in the Krško Nuclear Power Plant in Slovenia and the Paks Nuclear Power Plant in Hungary,
16. provide dosimetric assessments of exposure to ionising radiation of exposed workers, of the population from medical exposure and from exposure to ionising radiation originating from environmental radionuclides,

17. fulfil the obligations which the Republic of Croatia has assumed through international conventions and bilateral agreements concerning protection against ionising radiation, nuclear safety and the application of protective measures aimed at the non-proliferation of nuclear weapons,
18. cooperate with international and domestic organisations and associations in the area of protection against ionising radiation and nuclear safety, and appoint its own expert representatives to take part in the work of such organisations and associations or to monitor their work,
19. coordinate technical cooperation with the International Atomic Energy Agency for all participants from the Republic of Croatia,
20. stimulate and support scientific and research and development activities, encourage professional, statistic and other research in accordance with the demands and requirements of the development of nuclear safety and protection against ionising radiation in the Republic of Croatia,
21. issue instructions for implementing international recommendations and standards in the area of protection against ionising radiation and nuclear safety and design the standards and methods in monitoring the state of protection against ionising radiation,
22. carry out other activities under its competence pursuant to this Act, regulations adopted on the basis thereof, and other regulations.

SORNS is organised into three Sectors, the Sector for Ionising Radiation Protection, the Sector for Nuclear safety and the Sector for the Emergency.

The Beneficiary has established Project Implementation Unit and its members received Project Cycle Management and other relevant training.

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

- Nuclear Safety and Radiation Protection action of the Multi-beneficiary MIPD 2009-2011 and 2011-2013 ;
- European Commission, report "Radiation Protection 122" (2001);
- The Act on Radiological and Nuclear Safety (OG 28/10).

ANNEX V: Details per EU funded contract

The following two contracts are expected to be concluded to implement this project:

Contract 1 - Service contract for an EU contribution of EUR 171 000 following a call for tenders launched in the third quarter of 2012. Account of tasks expected from the contractor:

- Perform assessment of current Croatian emergency preparedness.
- Develop a report on regulatory framework related to emergency preparedness.
- Upgrade national emergency preparedness plan, including urgent health-protective measures and harmonize response procedures with adjacent countries with nuclear power plants on their territories.
- Perform assessment of existing equipment and identify minimum response equipment still needed
- Develop tender documentation for the identified equipment
- Develop education plans and training materials for all stakeholders
- Conduct training for first responders
- Prepare and conduct radiological incident exercise
- Evaluate emergency response exercise and elaborate the plan upon acquired experience (lessons learned)
- Develop scenario and planning documents for large scale nuclear accident exercise

Contract 2 - Supply contract for an EU contribution of EUR 263 500 following a call for tenders launched in the fourth quarter of 2013.

The list provided is indicative, given that the list of required equipment will be developed through the TA contract. It will depend on existing capabilities and it is envisaged to consist of the minimum response capabilities. Indicatively it should consist of the following:

- **Protective equipment**

Protective suits (including accessories such as gloves, overboots, masks)

- (proposal 80 pieces - 20 per each regional centre)

within total amount of EUR 10 000

- **Radioactive detection equipment such as**

- combined α , β , γ surface contamination detector (proposal 5)
- electronic personal dosimeter (proposal 60 pieces)

within total amount of EUR 140 000

- **Decontamination equipment** (proposal 1 set per each regional centre, total 4)
 - Tent for decontamination of persons with additional necessary equipment such as:
 - muddy water pump
 - electric inflation/deflation device with simultaneous arch inflation system
 - waste water tank
 - clean water tank
 - expandable roller system for non-ambulatory decontamination
 - complete power supply system (safe for use in humid and wet environments)
 - water heating system

within total amount of EUR 160 000

Indicative budget for equipment (supply contract) EUR 310 000

This project will be implemented by the State Office for Radiological and Nuclear Safety. The implementation of this project will be decentralised.

Lead Beneficiary (including details of SPO):

Main beneficiary:

State Office for Radiological and Nuclear Safety
Frankopanska 11, Croatia – 10020 Zagreb

Responsible person:

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Beneficiaries: National Protection and Rescue Directorate, Ministry of Health and Social Welfare, Ministry of Agriculture, Fisheries and Rural Development, authorised technical services and emergency response organisations